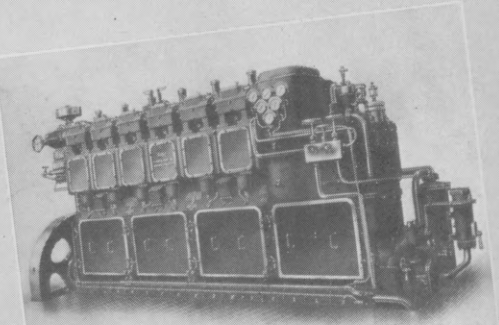


*A few representative types of
Nordberg Marine Diesel Engines*



Heavy Duty and High Speed Nordberg Marine Diesel Engines

There is a Nordberg-Fiat design to meet every demand for marine Diesel service. Whether it is the main power unit for a liner, tanker, cargo ship, dredge, ferry, yacht or submarine, or if an auxiliary unit is needed, the complete line in which these engines are now offered permits the selection of an economical size and a design that best meets the conditions. A few such types are shown above ranging from slow speed, heavy duty engines of 1250 H.P. running at 115 R.P.M. to auxiliary units of 90 H.P. at 450 R.P.M.

These heavy duty and high speed types are of approved design and of known performance. They follow the designs of Fiat, long known in marine

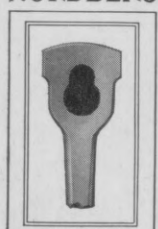
circles for their excellence and durability. They are also found in submarine service in many of the leading navies.

In America, Nordberg has always held the leadership as builders of Diesel engines for stationary service. For years the record for size of Diesels built in this country has been held by Nordberg. In addition to the record for size, the engines produced by this company have also gained a high reputation for service and satisfaction.

Nordberg facilities, both in organization and manufacturing are unexcelled for the building of engines for marine applications.

**If you are considering new development or conversion and
in need of Diesel power, let us quote on your requirements.**

NORDBERG



MACHINERY

NORDBERG MFG. CO., MILWAUKEE, WIS.

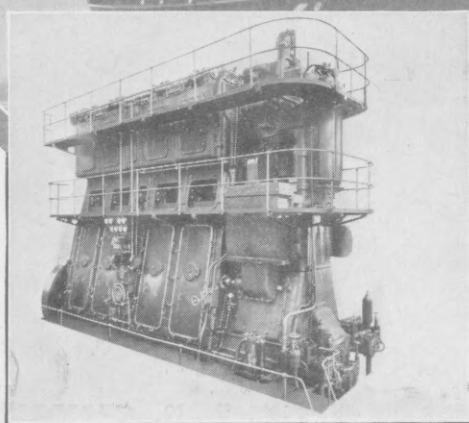
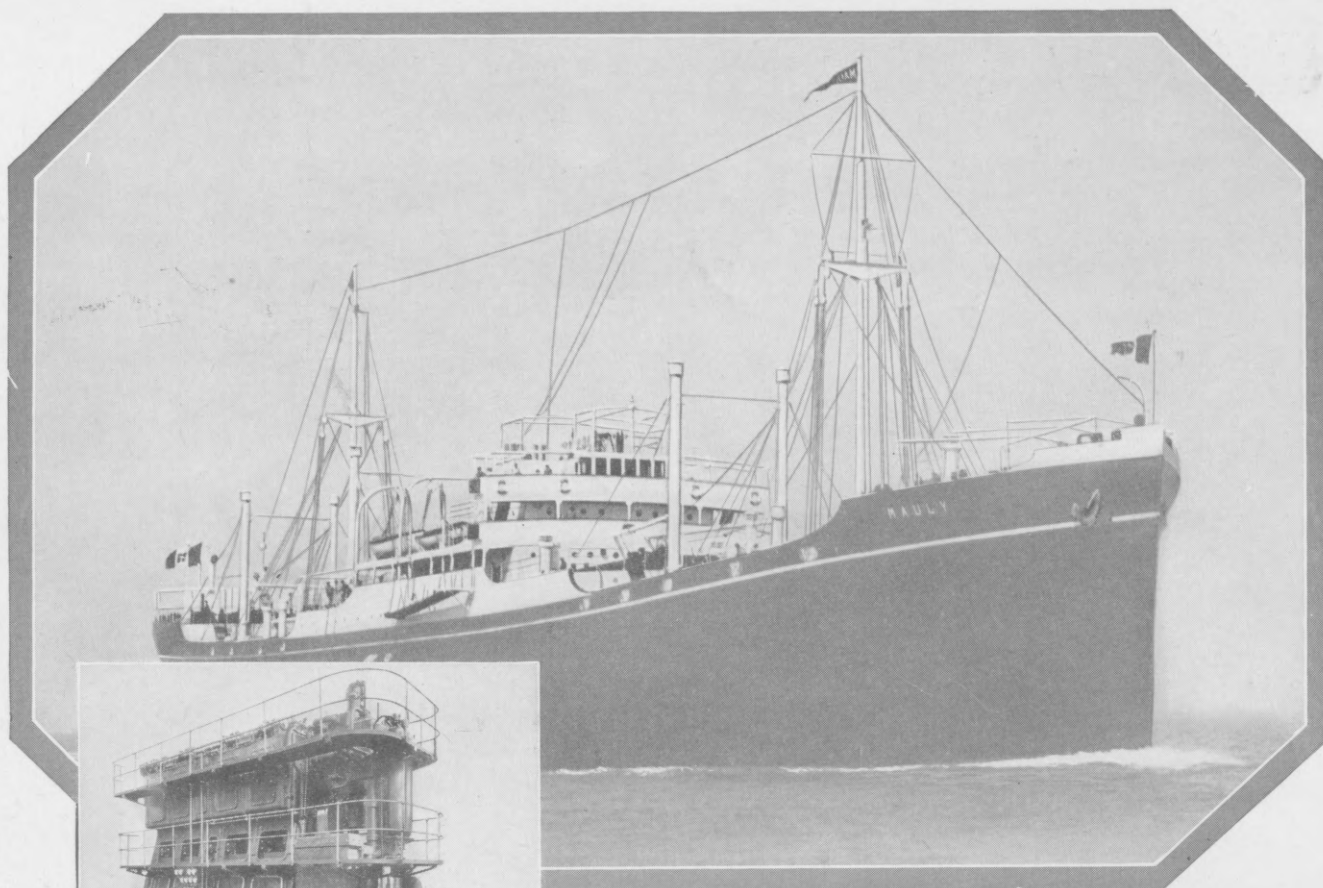
NORDBERG

NORDBERG



MACHINERY

"MOTORSHIP" for January, 1927. Vol. XII, No. 1. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.



Motorship MAULY, an 8,700 ton cargo boat built by the Cantiere Navale Triestino of Monfalcone and equipped with two Fiat Diesel Engines, each developing 1250 horsepower at 115 R.P.M.

Diesels of Known Design and Performance

BACK of the marine Diesel Engines now offered by Nordberg are enviable records for performance and service rendered. Diesels built by Nordberg in America and Fiat in Europe are recognized for the high quality of their design, their better construction and thorough dependability.

Nordberg has now secured the manufacturing rights for Fiat Diesels in America. This enables the American user of marine Diesels, particularly in

the larger sizes, to benefit by the experiences and engineering skill of these two companies together with the extensive manufacturing facilities of Nordberg.

You take no chances with the purchase of Nordberg-Fiat Diesels. They are of a known design that has proved successful after long and severe service. There are now over 230,000 H.P. in service in the high seas, and have performed in a manner that has fulfilled every expectation.

When considering the power equipment for that motor ship, whether it is new construction or conversion, Nordberg Engineers will gladly explain the many features of Nordberg-Fiat Diesels.

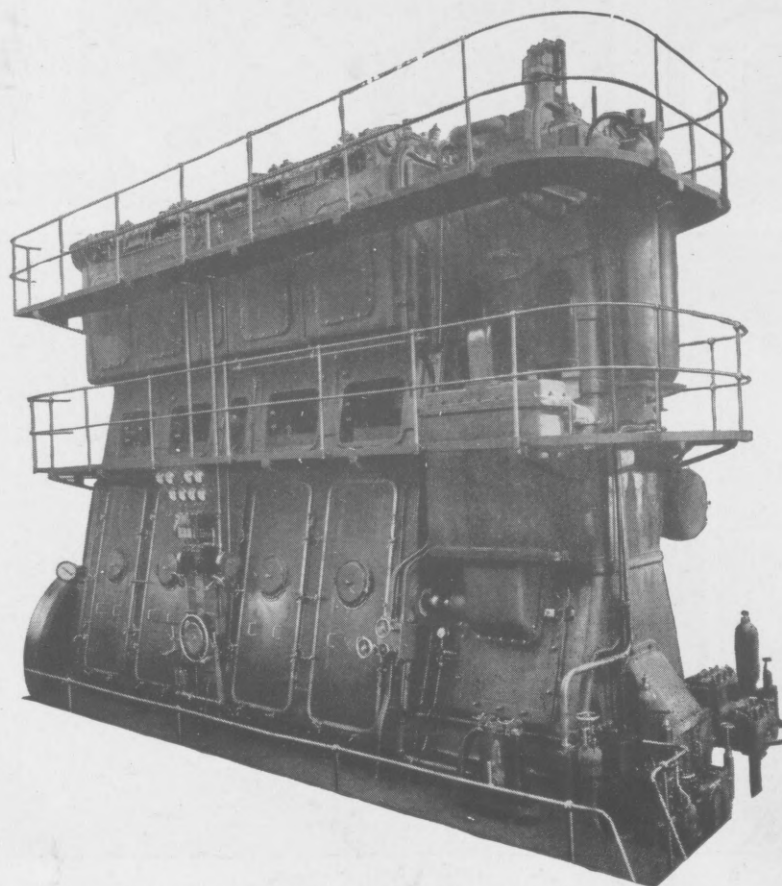
NORDBERG MFG. CO., MILWAUKEE, WIS.

NORDBERG-FIAT

MARINE DIESEL ENGINES

"MOTORSHIP" for February, 1927. Vol. XII, No. 2. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

A complete line of heavy duty and high speed types. Exceptional facilities for building large and medium sized units.



Features of design and construction embody the best of European and American marine Diesel practice.

Four cylinder engine developing 1250 H.P. at 115 R.P.M.

Marine Diesels For That Important Service

The selection of the power unit for the motorship is a matter of great importance. It is essential that the design and construction is such that it will stand up under this severe service. Past performance is just as vital.

By securing the American license for building Fiat engines, Nordberg offers Diesels of approved design and of known performance, engines that have met every

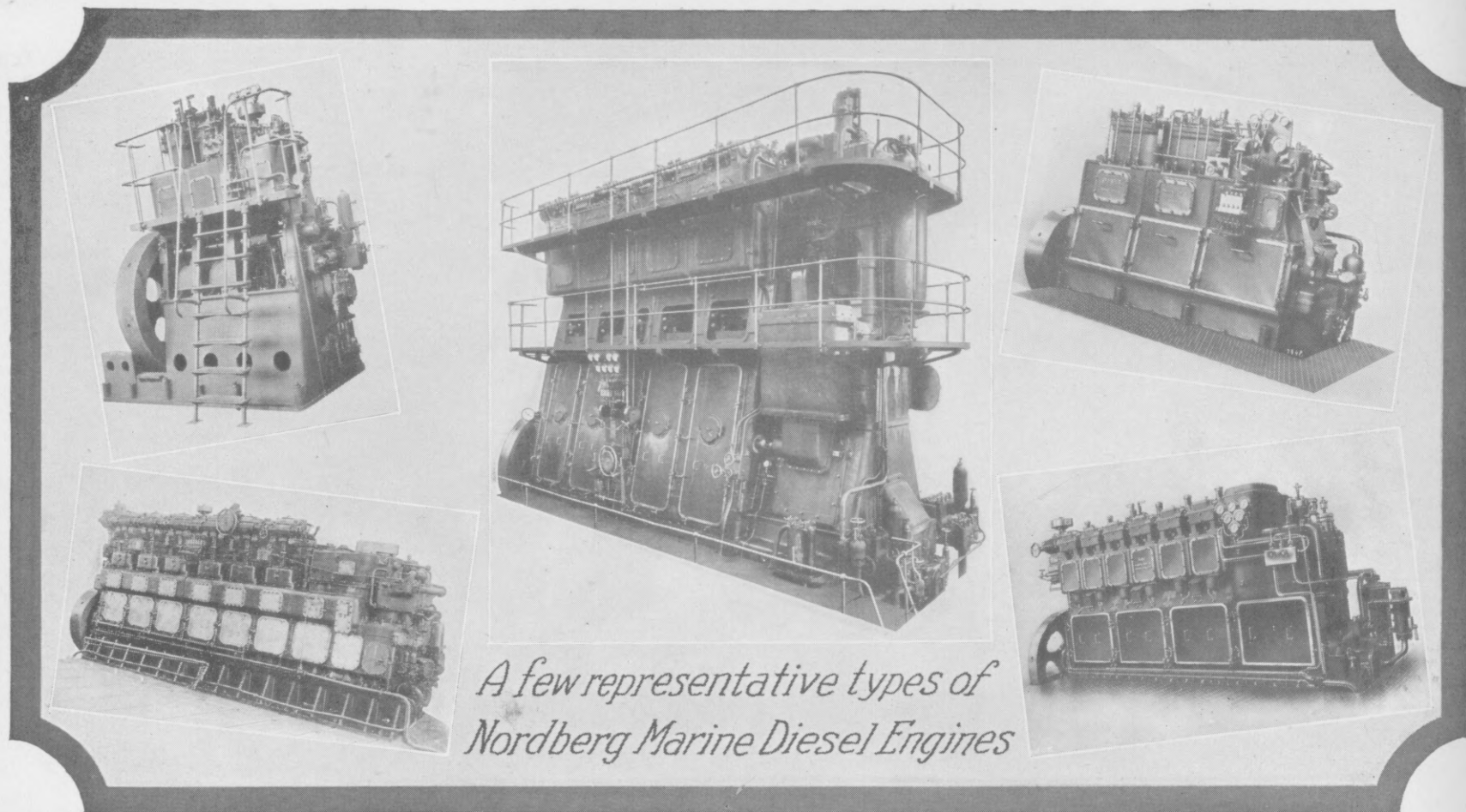
requirement and have back of them an enviable record of satisfaction. This combination of experience, skill and manufacturing facilities, enables the purchaser of a marine Diesel to select an engine that will meet every expectation. That over a quarter million horsepower are now in service on the high seas is evidence of their success and that no chance is taken in the purchase of a Nordberg-Fiat Diesel.

When considering the power equipment for that motorship, whether tanker, liner, cargo vessel, dredge, ferry or yacht, there is a Nordberg-Fiat design that will meet your needs.

NORDBERG MFG. CO., MILWAUKEE, U. S. A.

NORDBERG-FIAT
MARINE DIESEL ENGINES

"MOTORSHIP" for March, 1927. Vol. XII, No. 3. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.



*A few representative types of
Nordberg Marine Diesel Engines*

When Selecting The Power Unit For That Motorship

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IN no other Diesel application is the question of dependability of greater importance than aboard ship. The selection of the power unit is a matter that requires the most careful consideration. It is essential that the best possible unit be secured that meets the conditions of that particular service.

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NORDBERG

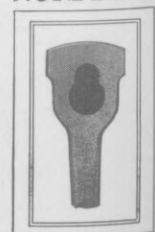
NORDBERG MFG. CO., MILWAUKEE, WIS.

NORDBERG



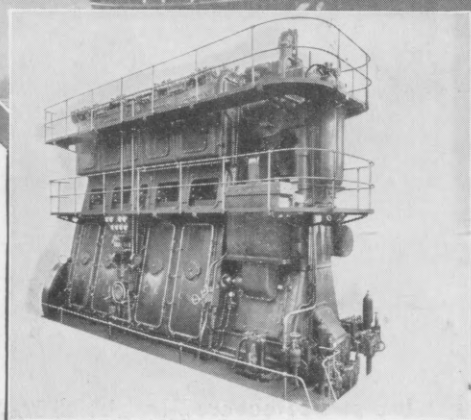
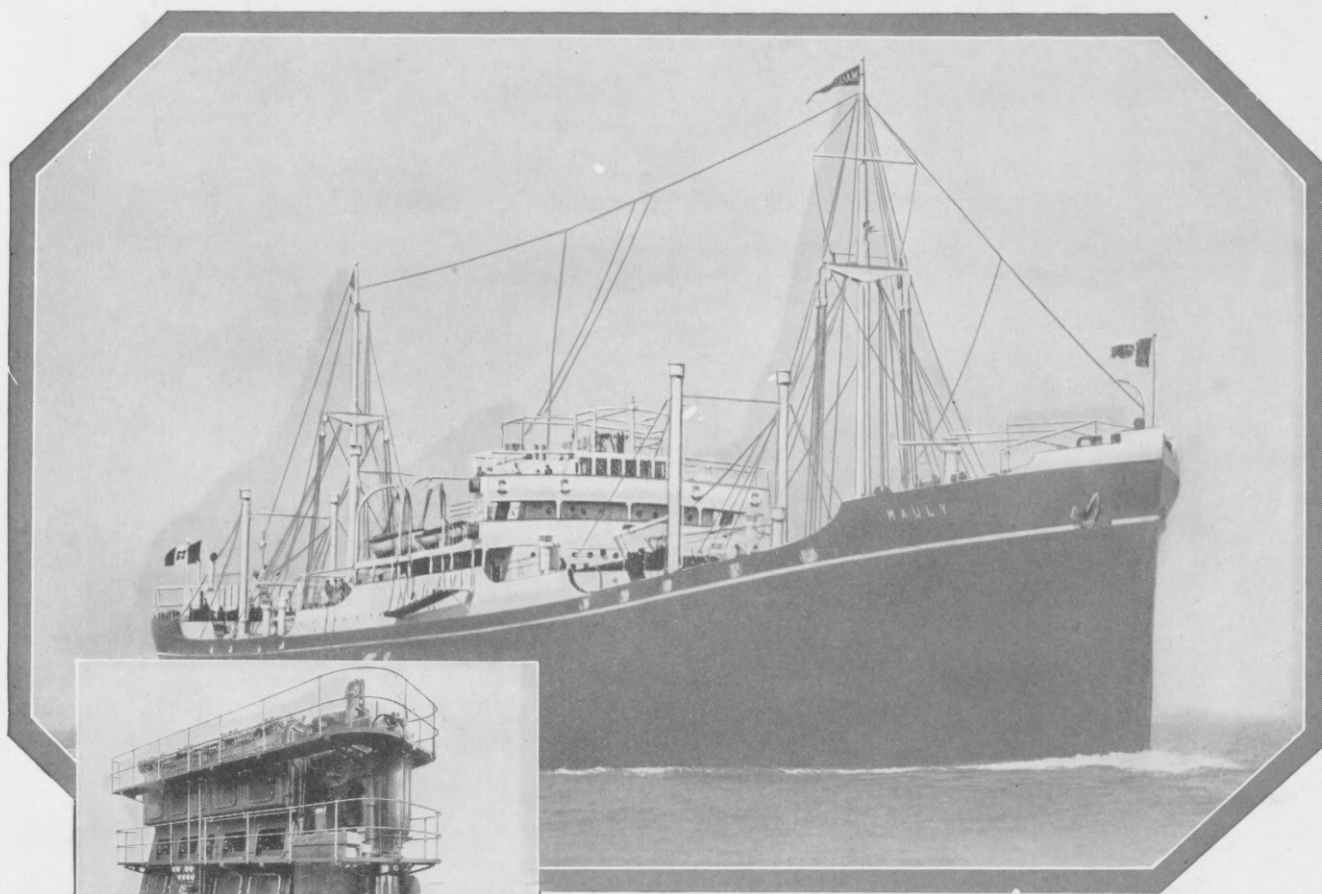
MACHINERY

NORDBERG



MACHINERY

"MOTORSHIP" for April, 1927. Vol. XII, No. 4. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.



The 8,700 ton Motorship MAULY, a cargo boat, is equipped with two Fiat Engines, each developing 1250 H.P. at 115 R.P.M. In a measure the satisfactory performance of this boat is due to the service that these engines have rendered."

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Nordberg has now secured the manufacturing rights for Fiat Diesels in America. This enables the American user of marine Diesels, particularly in

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You take no chances with the purchase of Nordberg-Fiat Diesels. They are of a known design that has proved successful after long and severe service. There are now over 230,000 H.P. in service in the high seas, and have performed in a manner that has fulfilled every expectation.

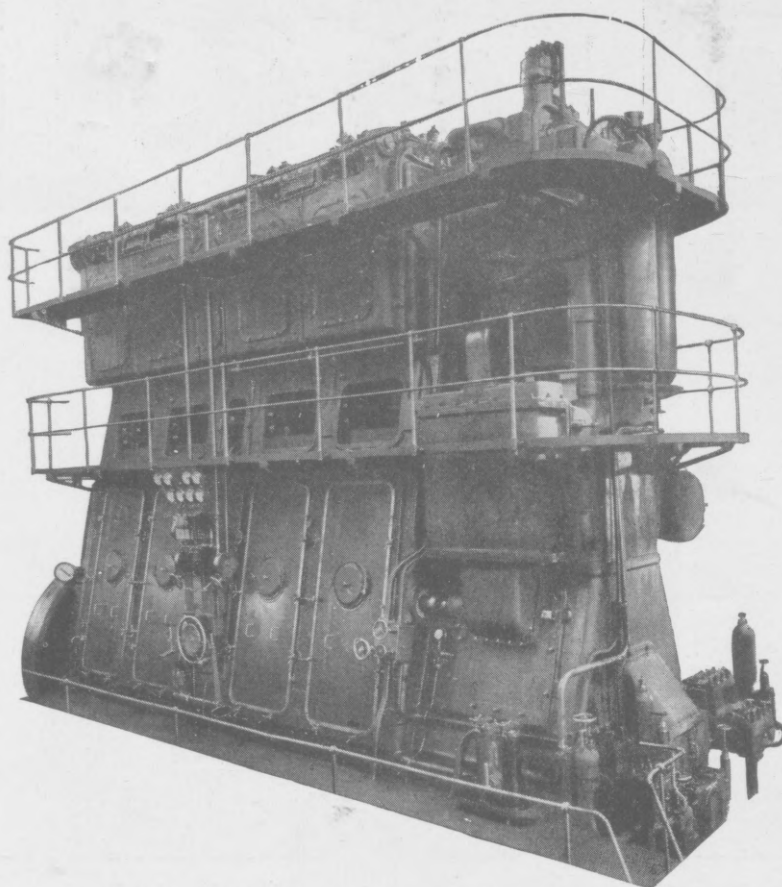
"Diesel Engines and Nordberg are synonymous for Quality and Dependability among the users of large stationary Diesel engines in this country. Combined with Fiat this same high quality is now offered to users of Marine Diesels.

NORDBERG MFG. CO., MILWAUKEE, WIS.

NORDBERG-FIAT

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A complete line of heavy duty and high speed types. Exceptional facilities for building large and medium sized units.



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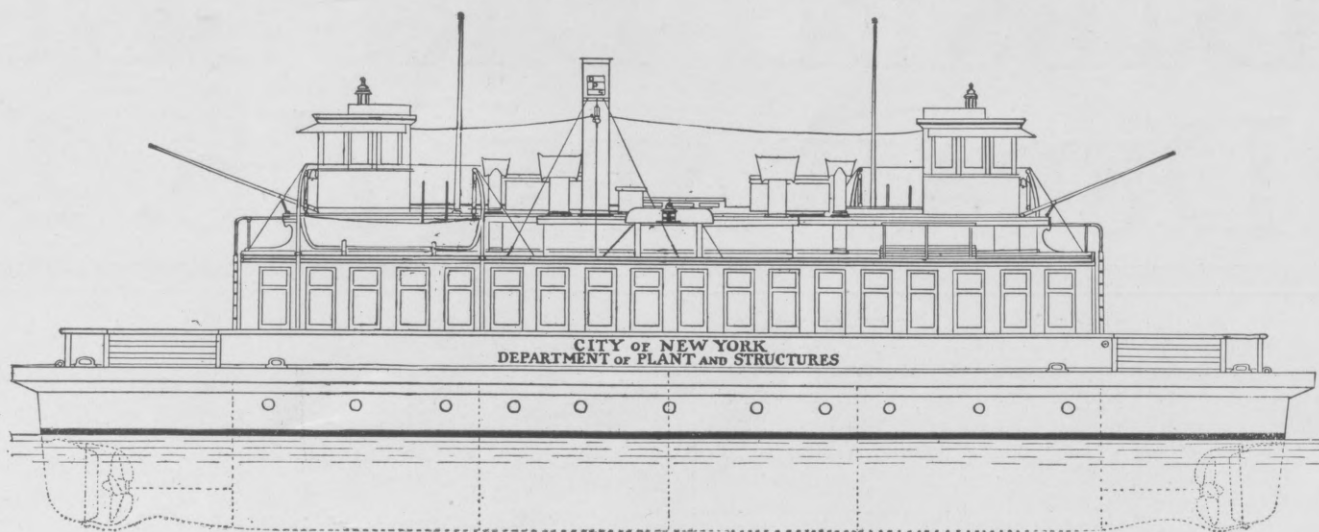
requirement and have back of them an enviable record of satisfaction. This combination of experience, skill and manufacturing facilities, enables the purchaser of a marine Diesel to select an engine that will meet every expectation. That over a quarter million horsepower are now in service on the high seas is evidence of their success and that no chance is taken in the purchase of a Nordberg-Fiat Diesel.

When considering the power equipment for that motorship, whether tanker, liner, cargo vessel, dredge, ferry or yacht, there is a Nordberg-Fiat design that will meet your needs.

NORDBERG MFG. CO., MILWAUKEE, U. S. A.

NORDBERG-FIAT
MARINE DIESEL ENGINES

"MOTORSHIP" for June, 1927. Vol. XII, No. 6. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.



Profile drawing of new Municipal Ferry. L. O. A. 101 ft. 6 in.; W. 30 ft. 0 in.; D. 11 ft. 10 $\frac{1}{2}$ in. To be powered with a 300 B. H. P. Nelseco Diesel Engine, type 6 MIR-18. Capacity, 160 passengers (seated) and 5 automobiles

The First Municipal Diesel-driven Ferries

CONTRACTS were signed recently by the New York Department of Plant and Structures for two Diesel-powered ferries... the first of the type to be owned and operated by the City of New York.

These ferries are being built by the Todd Dry Dock Engineering and Repair Corporation at the Tebo Yacht Plant, Brooklyn, N. Y., under the direction of Commissioner Albert Goldman. It is probable they will be put in service in the East River early this summer.

Each of these vessels will be powered with a 300 B. H. P. Nelseco Diesel Engine of the latest direct-reversible, mechanical-injection type.

These engines are similar in design to the 24 Nelseco Diesels recently ordered by the Southern Pacific Railroad Company for use in ferry boats on San Francisco Bay and the 12 Nelseco Diesels now in use on new Electric Ferries in New York harbor.

The selection of Nelseco Diesels for the first Municipal Ferries is only natural in view of the ruggedness, simplicity, and proven efficiency of these dependable power units.

Nelseco engineers will gladly help you with your power problems and will furnish astonishing figures on the low operating cost of Nelseco Diesel Engines. Write for Pamphlet M. S.

NEW LONDON SHIP & ENGINE COMPANY
Groton, Conn., U. S. A.

Chicago Representative
H. JACOBSEN
25 North Dearborn Street

New York Sales Office
247 Park Avenue, New York City

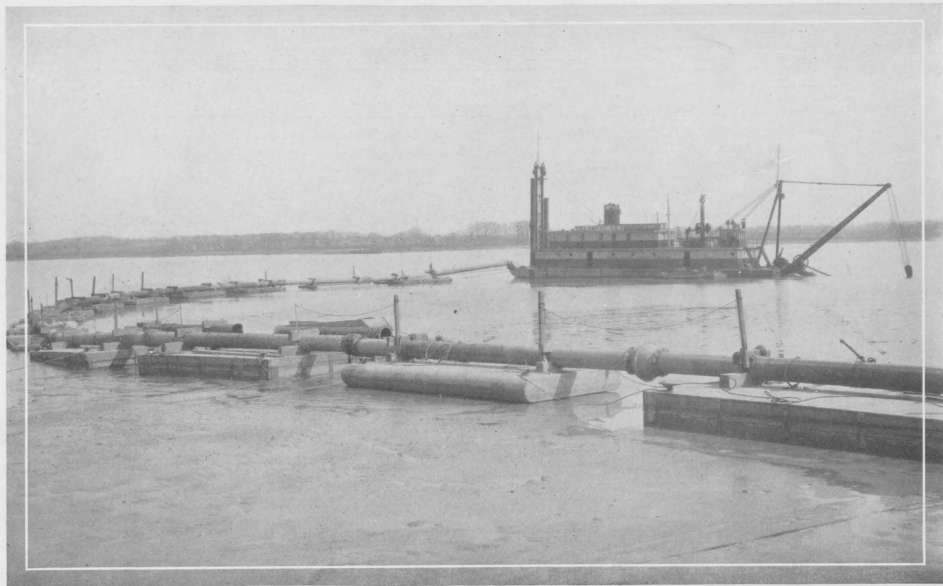
West Coast Representative
KING-KNIGHT CO.
Seattle, San Francisco, Los Angeles

NELSECO

Original licensees from and collaborators with M.A.N. since 1910

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DIESEL DREDGE DELAWARE No. 2

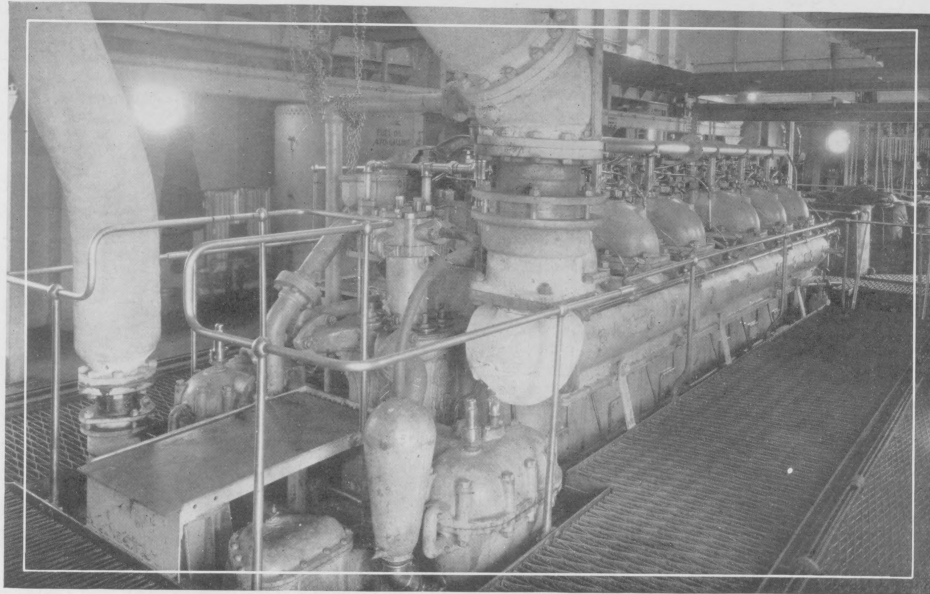


Main Engine 6 Cylinder Winton Diesel—800 B. H. P. at 250 R. P. M.
Auxiliary Engine 6 Cylinder Winton Diesel—225 B. H. P. at 350 R. P. M.
Owned by American Dredging Co., Philadelphia, Pa.
Built by Sun Shipbuilding & D. D. Co.

The **WINTON**
ENGINE
CLEVELAND

NEW YORK—A. G. Giese, Inc., 331 Madison Ave. LOS ANGELES—F. G. Bryant, 201 F. W. Braun Bldg.
CLEVELAND—F. C. Erdman Co., Union Trust Bldg. WASHINGTON—R. L. Fryer, 430 Transp't'n Bldg.

WINTON POWERED



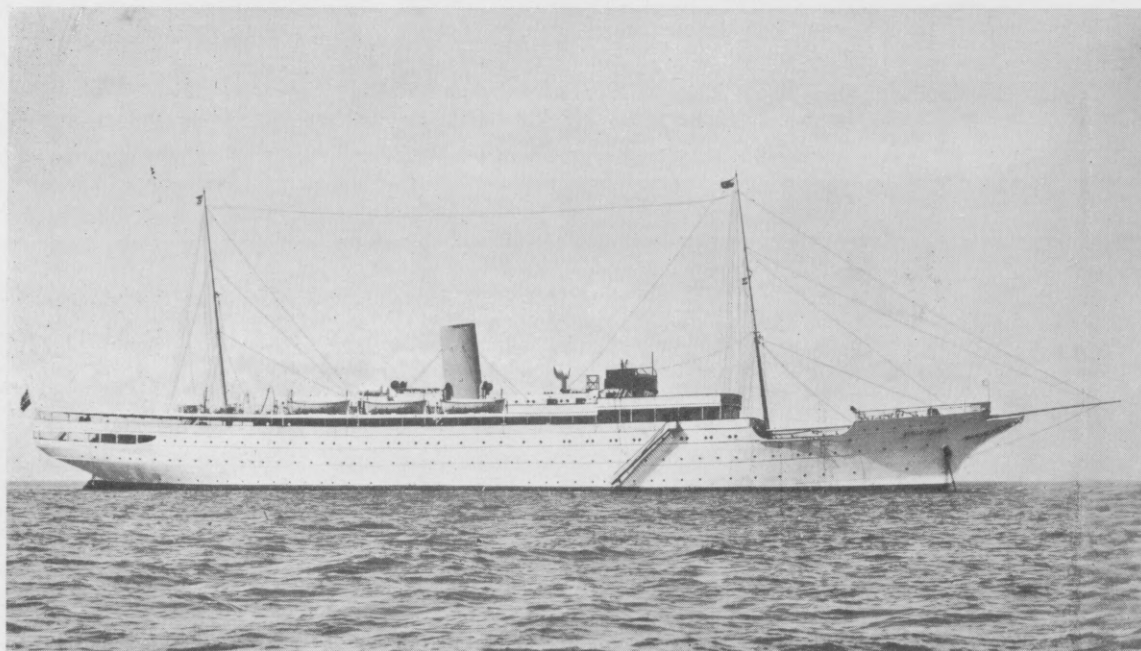
Engine Room of Dredge "Delaware No. 2"

This installation embodies several unusual engineering features never heretofore applied to Diesel Dredging practice. Complete data will be furnished upon request.

T WINTON
COMPANY
OHIO - - U. S. A.

NEW ORLEANS—Warren C. Graham Co., 411 Godchaux Bldg. SEATTLE—J. O. Larsen, 19 Colman Dock.
BOSTON—Walter H. Moreton Corporation, 1045 Commonwealth Avenue.
MIAMI—Winton Engine Sales Co., Inc., 317 N. E. 1st St., at Biscayne Blvd.

GÖTAVVERKEN MOTORSHIPS



No. 34 THE M. S. "STELLA POLARIS"

Owners: The B. & N. Line (Det Bergenske Dampskipsselskab)
Bergen, Norway

Date of delivery Febr. 24th 1927
Passengers 200 1st class
Power 5,200 I. H. P.
Average speed 15.7 knots
Fuel consumption of main and auxil.
motors per 24 hours 16 5 tons
Cruising radius 10,000 naut. miles

BUILT AND ENGINED BY:

GÖTAVVERKEN

GOTHENBURG — — — SWEDEN

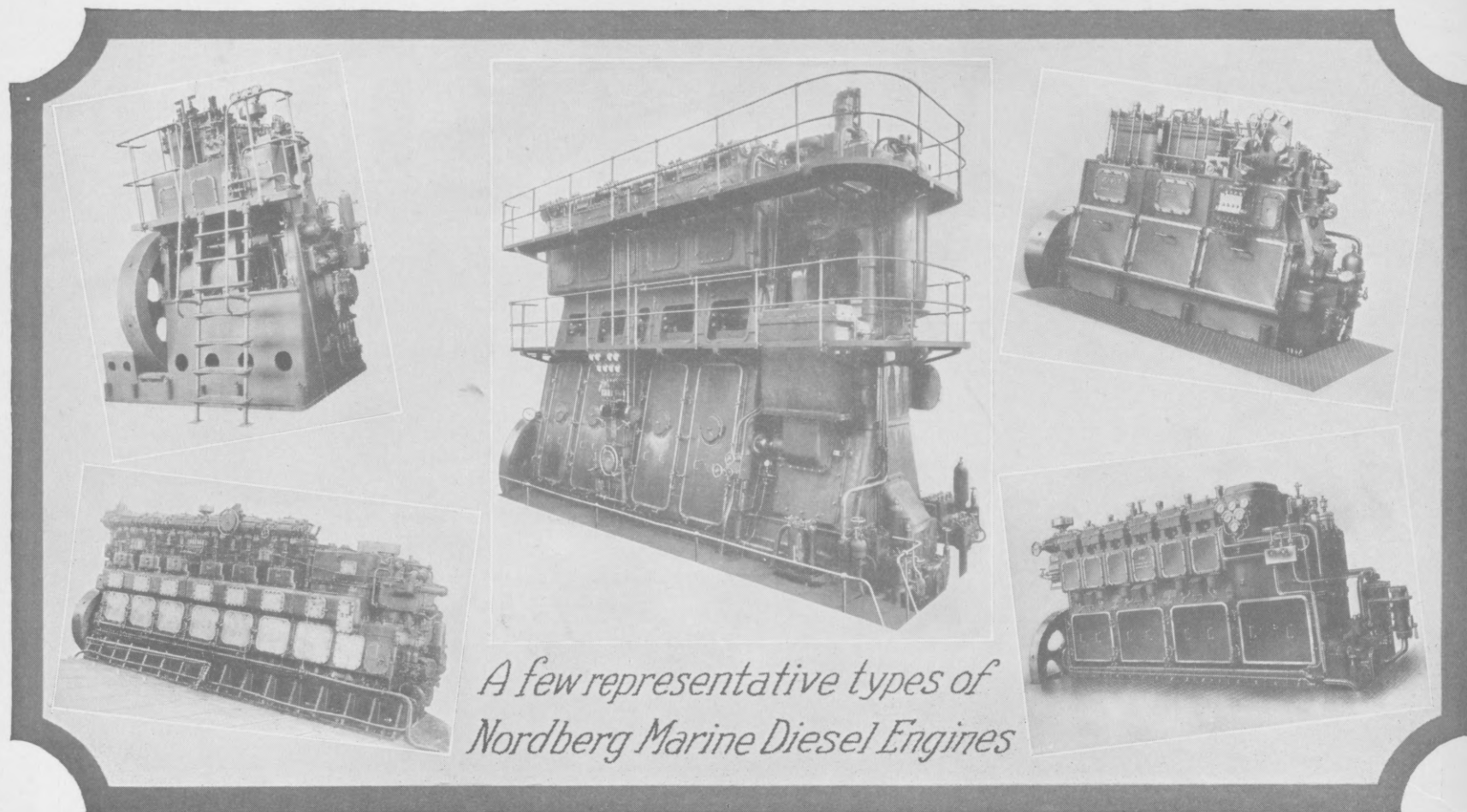
SHIPBUILDERS, SHIPREPAIRERS
BUILDERS OF DIESELMOTORS
MAIN LICENSEES FOR SWEDEN OF THE
B & W-MOTORS

FLOATING DRY DOCKS

Nº1 LIFTING CAPACITY **8,000** TONS
Nº2 " " **18,000** "

POSTAL & TEL. ADDRESS: **GÖTAVVERKEN** GOTHENBURG





*A few representative types of
Nordberg Marine Diesel Engines*

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NORDBERG



MACHINERY

NORDBERG MFG. CO., MILWAUKEE, WIS.

NORDBERG

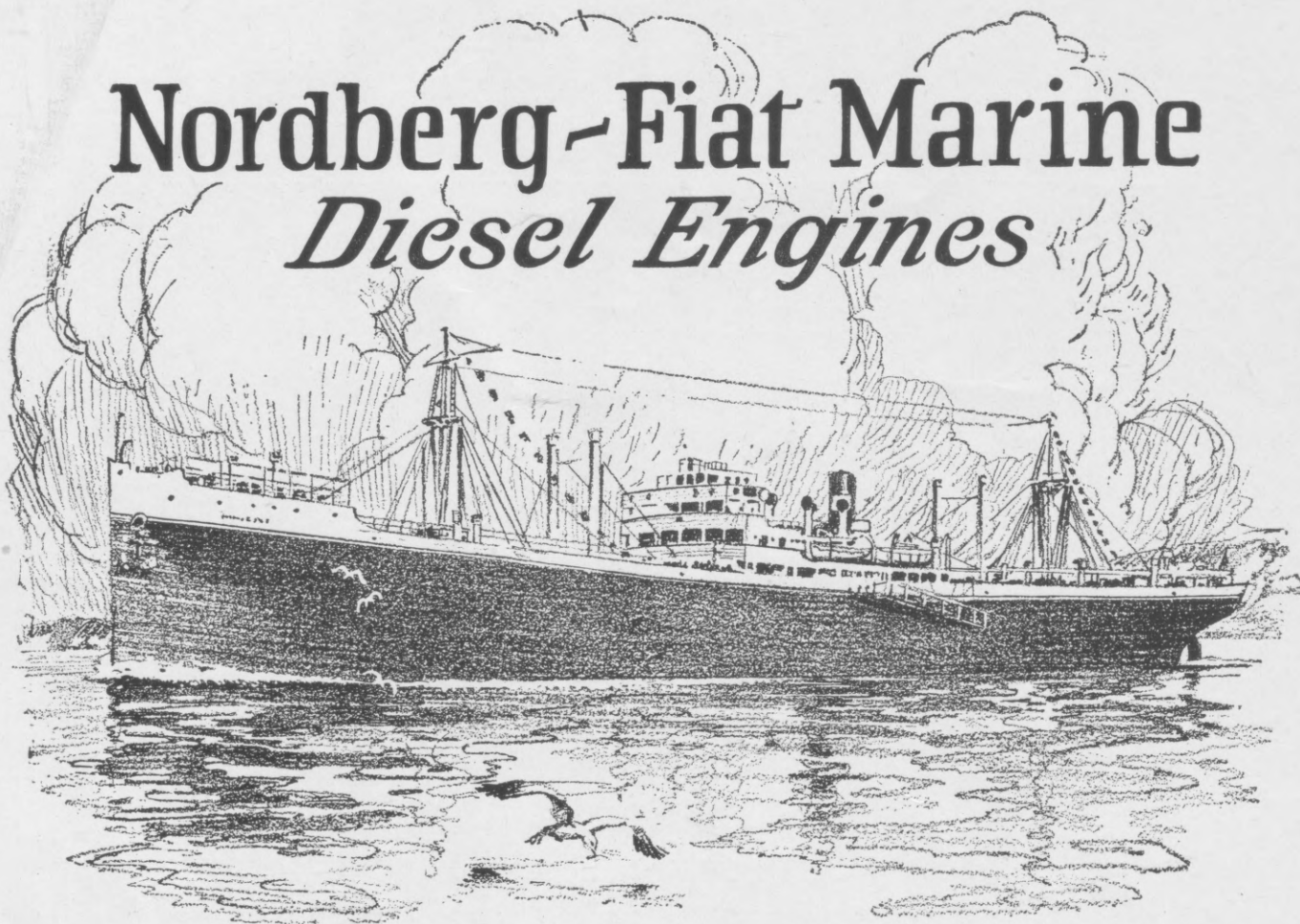
NORDBERG



MACHINERY

"MOTORSHIP" for July, 1927. Vol. XII, No. 7. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

Nordberg-Fiat Marine *Diesel Engines*



A Rapid Growing Tendency

The growing popularity of Diesel-electric drive is evidenced by its increased use in all kinds of vessels. At one time it was considered more applicable for tugs, ferries and river boats requiring smaller units only, but today it is looked upon with favor for large ocean-going dredges, cargo boats, tankers, etc. The many claims advanced for the Diesel-electric drive are being proved in a number of cases where direct comparisons have been made with other forms of drives. In addition to a greater flexibility and ease of control, this form of drive has shown the advantage of lower operating costs and better performance records.

Diesel-electric drive operates in a manner similar to the stationary plant. For larger installations there may be a multiple of smaller units which function and are cared for in a manner similar to a land station consisting of a number of engines.

The reputation of Nordberg Diesels in the stationary field is one to be proud of. The installations include the largest in the country. They will also be found in application where continuity of service is vital and a shut-down would be of serious consequences. Nordberg engines can be depended upon to serve unflinchingly.

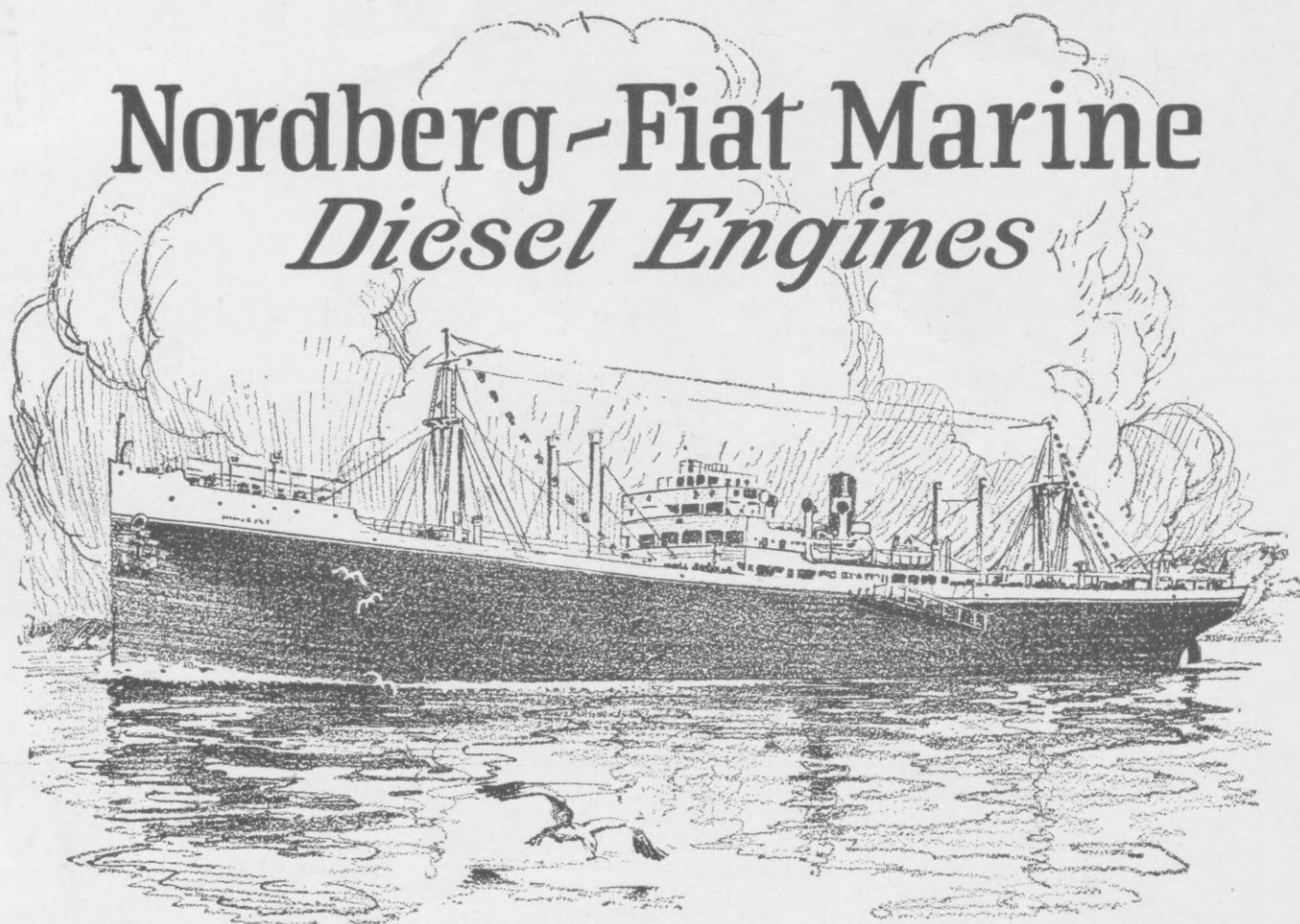
When again considering Diesel-electric drive, particularly for the larger installations, investigate the advantages of Nordberg Diesels.

Nordberg Mfg. Co., Milwaukee, Wis.

NORDBERG

"MOTORSHIP" for August, 1927. Vol. XII, No. 8. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

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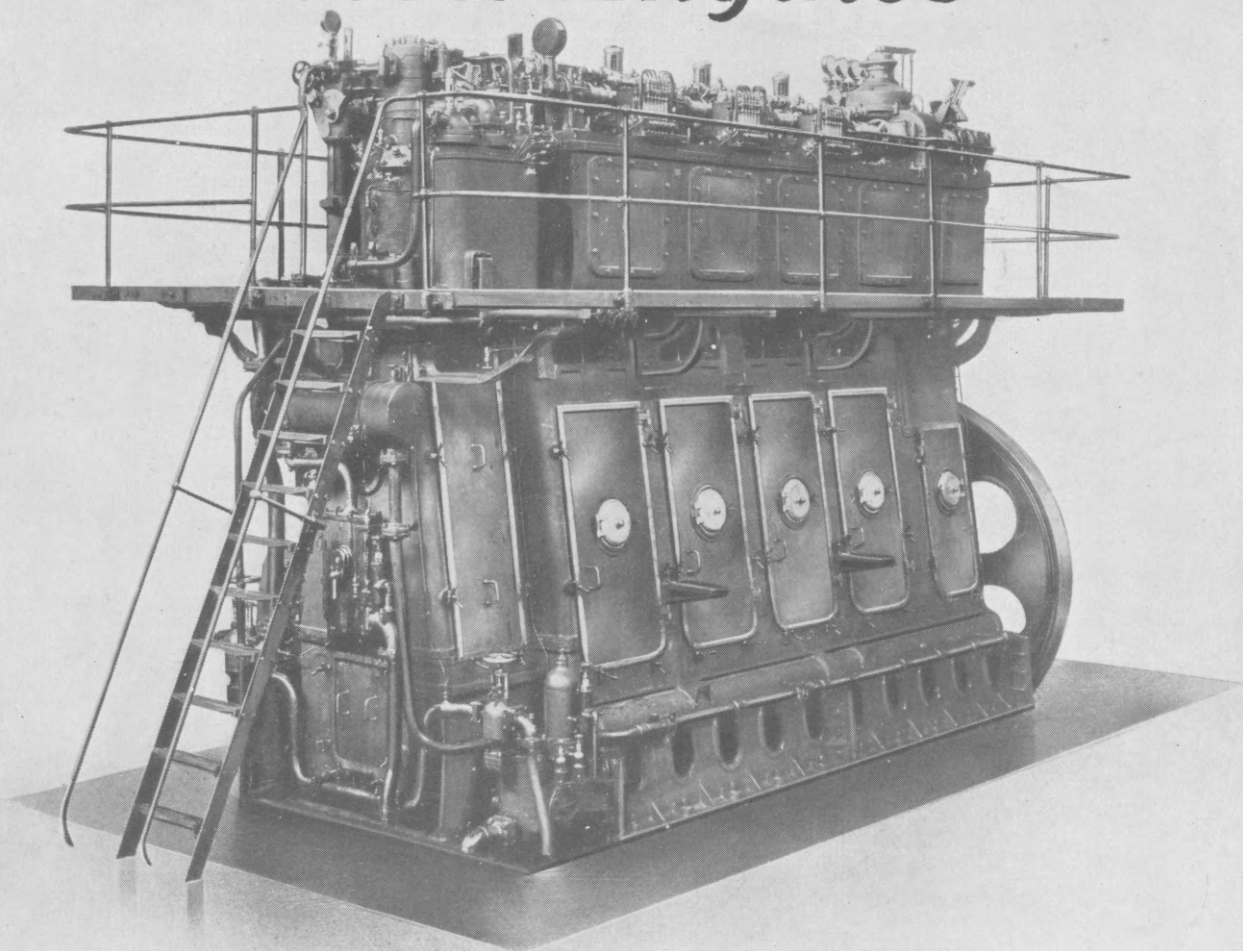
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Nordberg Mfg. Co., Milwaukee, Wis.

NORDBERG

Nordberg-Fiat Marine *Diesel Engines*



This four cylinder engine developing 950 horsepower at 250 R.P.M. was designed primarily for Diesel-electric drive in multi-engined motorships.

For that Diesel-Electric Drive

Rapid strides are being made today in Diesel-electric drive. With its many recognized advantages, its use has grown from small boats such as tugs and ferries to include large cargo ships. In these larger installations it means a number of units operating at constant speed and handled and cared for in many respects as is a land station where a number of units are employed.

Nordberg Diesels have long held an enviable position in the stationary field. They will be found in all the largest plants in this country and operating most satisfactorily under conditions where a failure of power supply would be a serious matter. Those contemplating Diesel-electric drive will make no mistake with Nordberg Diesels.

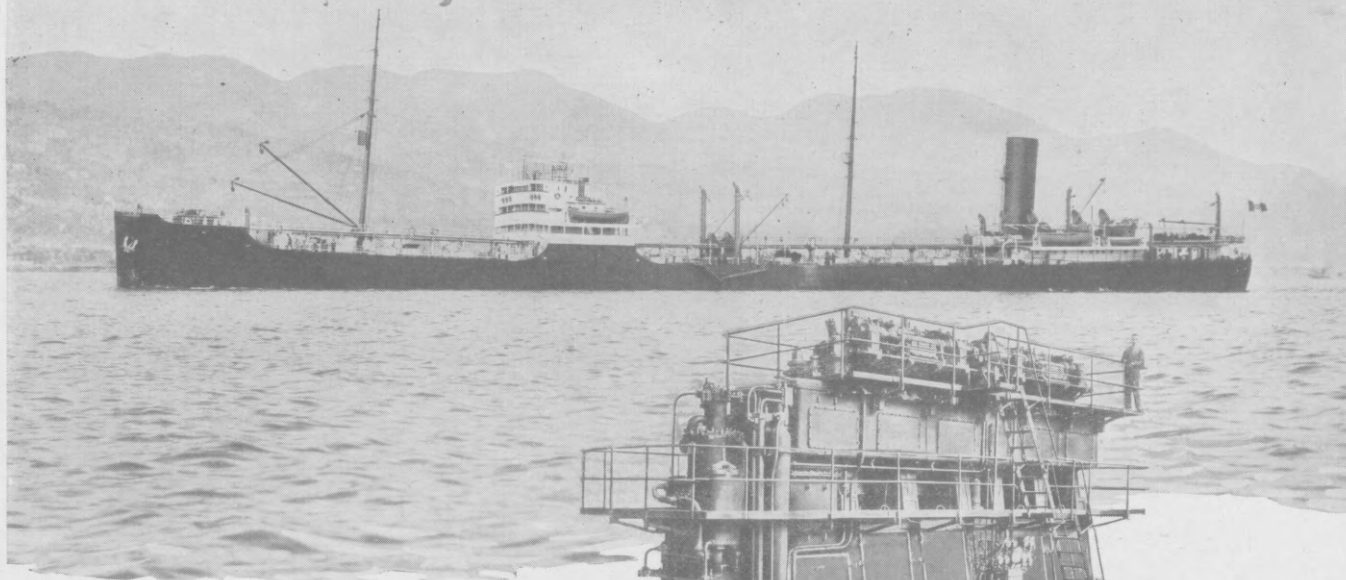
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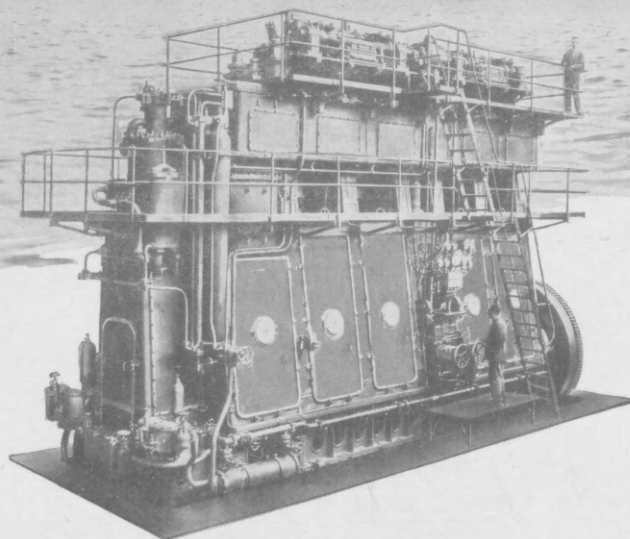
NORDBERG

"MOTORSHIP" for October, 1927. Vol. XII, No. 10. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

Diesel Engines for Marine Service



A tanker installation consisting of two four-cylinder engines developing 1,600 horsepower at 100 R.P.M.



Power for that Motorship

Whether it is a main propelling unit, or an engine for Diesel-electric or auxiliary drive, there is a Nordberg-Fiat Engine to serve you. As licensee for Fiat Diesels in America, Nordberg offers those tried and proved designs that have won such wide popularity especially in European marine circles.

For many years Nordberg has been among the foremost builders of Diesel Engines in this country.

America's largest Diesel power plants consist of Nordberg Engines. For Diesel-electric applications, where the service is quite similar to that in the stationary field, the designs offered are of especial interest. The years of experience gained from furnishing power equipment that had to perform under the most exacting conditions are back of these engines. They are built to give the kind of service that is expected from quality equipment.

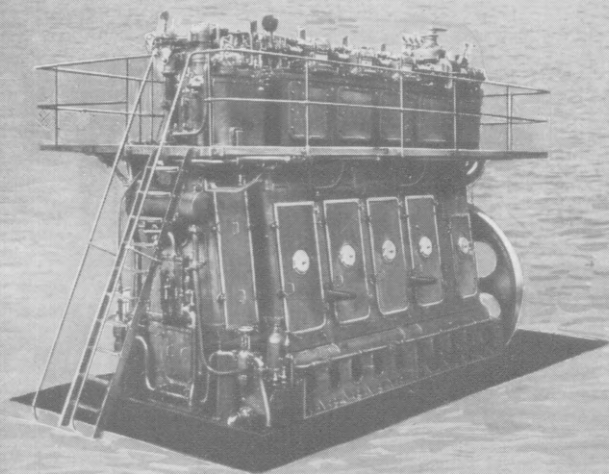
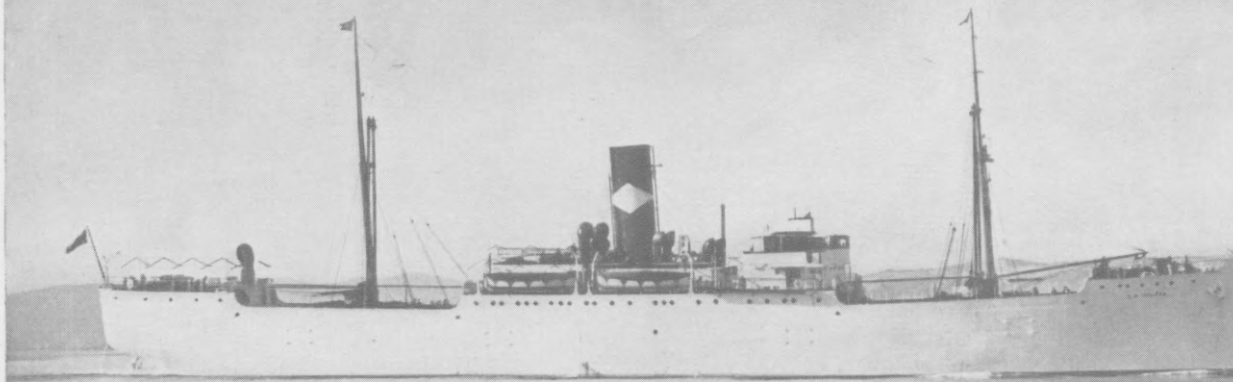
If you are planning to use Diesel Engines in either new construction or conversion, investigate the merits of Nordberg Engines.

Nordberg Mfg. Co., Milwaukee, Wis.

NORDBERG

"MOTORSHIP" for November, 1927. Vol. XII, No. 11. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

Marine Diesel Engines



Diesels of approved design offered by Nordberg

With the licensing of Nordberg to build Fiat Diesels in this country, there is offered to American shipping interests a complete line of these well-known engines. Whether it is the main propelling unit, or engines for Diesel-electric drive for the cargo ship, tanker, dredge, etc., it is possible to select an economical size and type. Complete manufacturing facilities and wide experience in Diesel Engine building assures a unit that will give the kind of performance expected today in Marine service.

Write us regarding your Diesel engine requirements.

Nordberg Mfg. Co. Milwaukee Wis.

NORDBERG

"MOTORSHIP" for December, 1927. Vol. XII, No. 12. A monthly journal published by MOTORSHIP, at 220 West 42nd Street, New York, N. Y. Entered as second class matter July 16, 1918, at the Post Office, New York, under the Act of March 3, 1879. Subscription, \$4.00 per year, domestic; \$5.00 foreign.

American *Hammered* Piston Rings

USED BY—

HOOVEN, OWENS, RENTSCHLER CO.

ON THEIR

HAMILTON M. A. N. DIESEL ENGINES

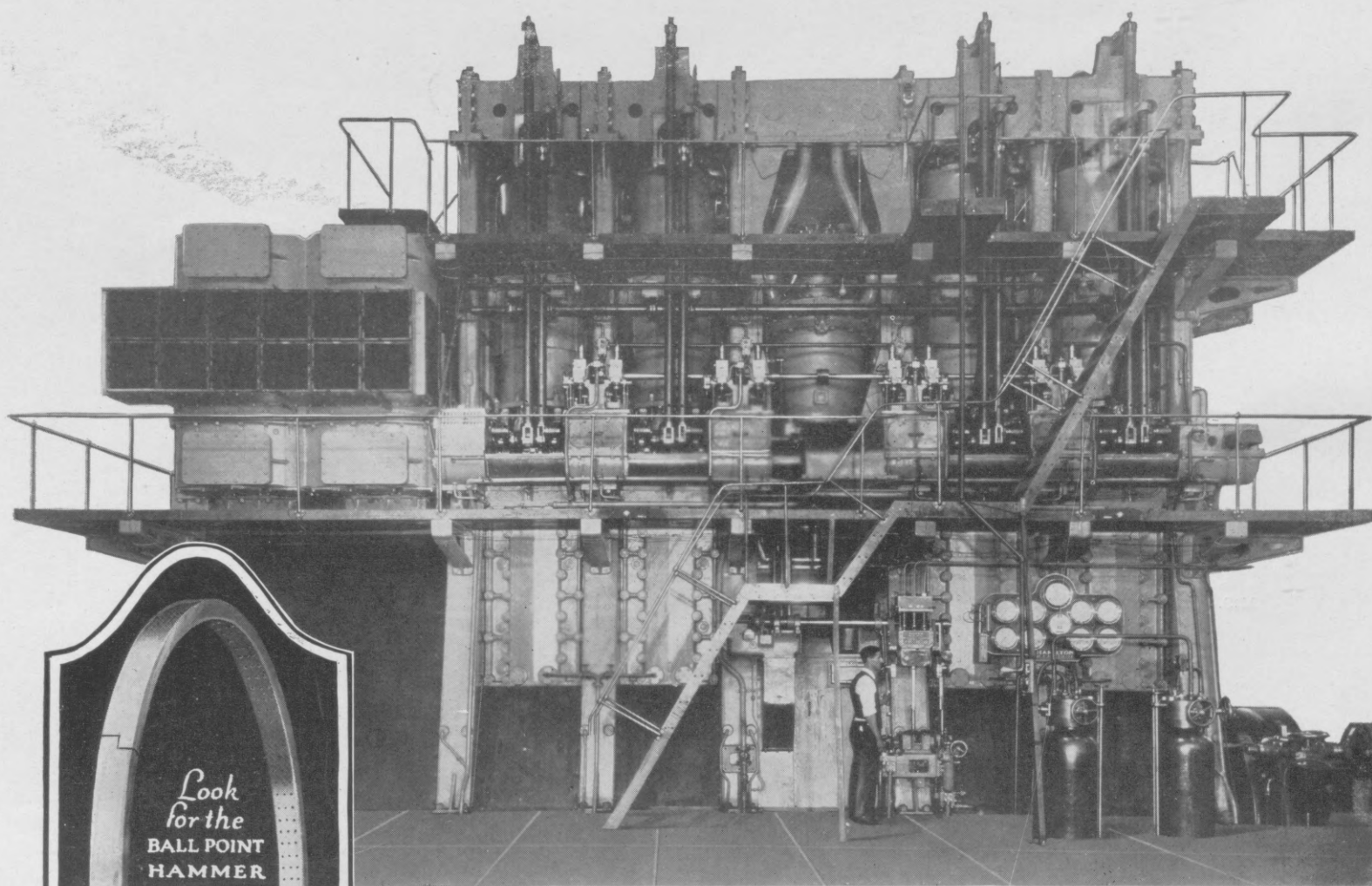


Illustration shows Hamilton M. A. N. 3,000 horsepower Double Acting, Two Cycle, Marine Diesel Engine for U. S. Shipping Board.

These Engines are American Hammered Equipt.

THE AMERICAN HAMMERED PISTON RING CO.
BALTIMORE, M. D.

E. V. WINTER

Pacific Coast Representative, Matson Bldg., San Francisco, Calif.

Detroit Office

7338 Woodward Ave., Detroit, Mich.

Power *with* Efficiency are the fundamentals of the



The East Indian

The Gulf of Venezuela

SEVEN large American vessels and one pleasure yacht are now equipped with American built Sun-Doxford Diesel Engines.

M.S. GULF OF VENEZUELA.....	3000 h.p.	10,200 d.w.t.
M.S. Twin-Screw EAST INDIAN.....	5000 h.p.	11,600 d.w.t.
M.S. CHALLENGER	3000 h.p.	11,600 d.w.t.
M.S. BIDWELL	3000 h.p.	10,200 d.w.t.
M.S. MILLER COUNTY	3000 h.p.	10,200 d.w.t.
M.S. BENSON FORD	3300 h.p.	12,000 d.w.t.
M.S. HENRY FORD II.....	3300 h.p.	12,000 d.w.t.
M.S. SUNOIL	3000 h.p.	13,300 d.w.t.
M.S. Twin-Screw Yacht SIALIA.....	1500 h.p.	



BUILDING

Motorship Twin-Screw5000 h.p. 17,000 d.w.t.

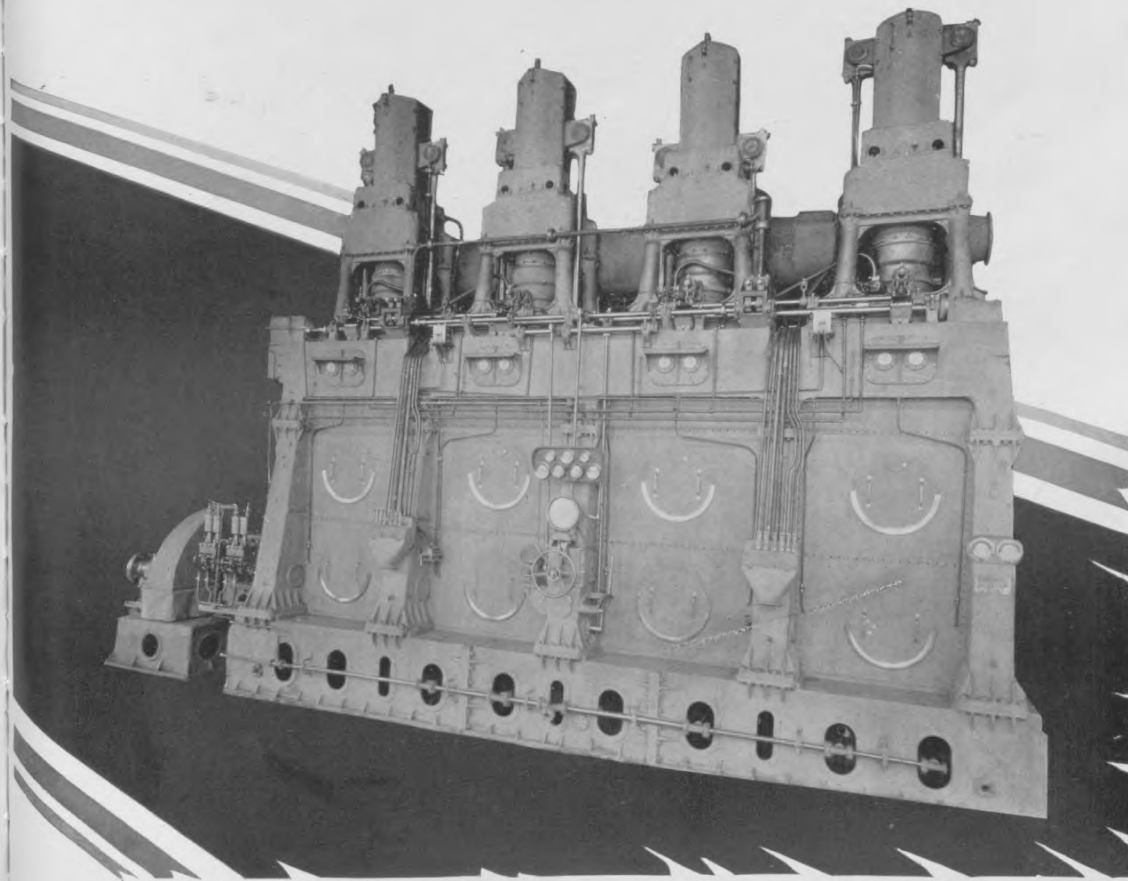


SUN SHIPBUILDING &

Shipyard and Main Office
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OPPOSED-PISTON SUN-DOXFORD TWO CYCLE DIESEL ENGINE



DRY DOCK COMPANY

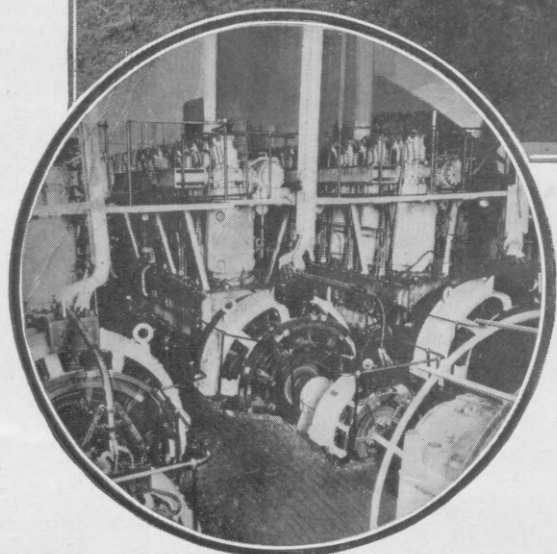
Philadelphia, Pa.

816 Cunard Building
25 Broadway, New York City





The Diesel-electric tanker "J. W. Van Dyke" passing through the Panama Canal



The Tanker "J. W. Van Dyke," owned by the Atlantic Refining Company, employs Diesel-electric drive. Three oil engine generator sets furnish current to a propulsion motor. Ingersoll-Rand Type PR Oil Engines, each developing 840 b. hp., drive the generator sets.

Have You Considered Diesel-Electric Drive?

Ingersoll-Rand Diesel-electric drive has been accepted. Each month sees an increasing number of conversions and new ships equipped with this type of drive. It is worth while to consider some of the reasons for this trend. They are:

1. Danger of complete shut-down at sea practically eliminated, due to the use of Ingersoll-Rand Engines and multiplicity of units.
2. High reserve power, due to conservative rating of Ingersoll-Rand Oil Engines and their ability to handle an overload.
3. High fuel economy of Ingersoll-Rand Engines.
4. Complete pilot house control, which means greater maneuvering ability.

Incorporate these important factors in your next installation.

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For Canada, refer Canadian Ingersoll-Rand Co., Limited, 10 Phillips Square, Montreal, Quebec.

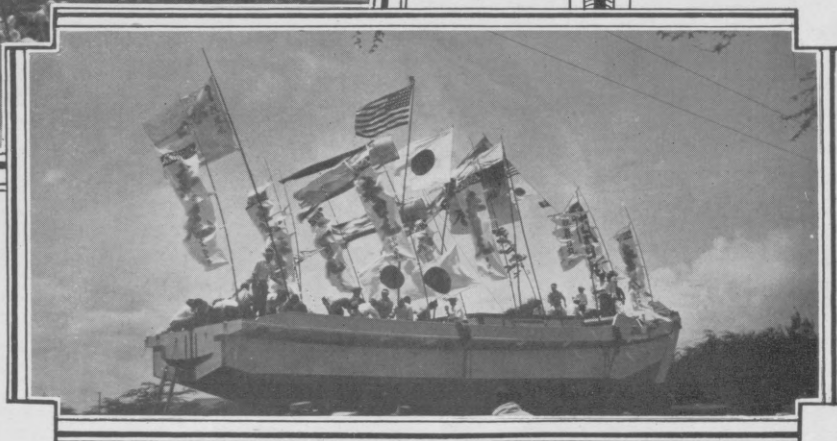
Ingersoll-Rand

59 MOE



SHUNEI MARU—53' x 10' x 4' Japanese Sampan powered with 30 h. p. three cylinder Atlas-Imperial Diesel Engine. Owner, K. Yamamoto, Honolulu. Speed, 8 knots.

KASUGA MARU—73' x 12' 6" x 4' Japanese Sampan powered with 110 h. p. Atlas-Imperial Diesel Engine. Owner, K. Hamada, Honolulu. Speed, 12 knots.



Japanese Sampans Become Dieselized

THREE Japanese Sampans, equipped with Atlas Imperial, four-cycle, airless injection Diesel engines, are now in service in Hawaiian waters. These boats are used for fishing off the Waianae and Aiea coasts of Oahu, where the Aku, the Hawaiian tuna fish is found in large shoals.

The "Kasuga Maru 828" with a 110-h. p. Atlas Imperial, The "Kasuga Maru 544" with a 70-h. p. Atlas Imperial and the "Shunei Maru" with a 30-h. p. Atlas Imperial. All sold and installed by the Honolulu Iron Works, distributors for Atlas Imperial in the Islands.

The Japanese Fisherman is quick to appreciate economy and dependability and the gospel of Atlas Imperial Efficiency has spread into the Japanese Fishing Fleets, just as it has through the Fishing Fleets of the United States and Canada.

ATLAS—IMPERIAL DIESEL ENGINE CO.

MAIN OFFICE AND WORKS:  19th Ave. & Livingston St., OAKLAND, CAL., U.S.A.

BRANCH SALES OFFICES AND REPRESENTATIVES:

EASTERN DISTRIBUTORS: Honolulu Iron Works Co., 165 Broadway, New York City

LOS ANGELES BRANCH: 439 South San Pedro St., Los Angeles, Calif.

PORTLAND, OREGON BRANCH: 200 Oak Street

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82 Marion Street

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Atlas-Imperial Engine Co.
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426 Howe Street

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Chas. G. Warner Company

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No. 3 Canton Road, Shanghai, China

Standard

Diesel Fuel Oil

The vast organization and scope of the Standard Oil Company (New Jersey) make it possible to offer shipping interests worldwide facilities for bunkering with "Standard" Diesel Fuel Oil. Our Diesel Oil is a highly refined and clean product, suitable for use in all full Diesel engines. It is recommended by the leading Diesel motor manufacturers.

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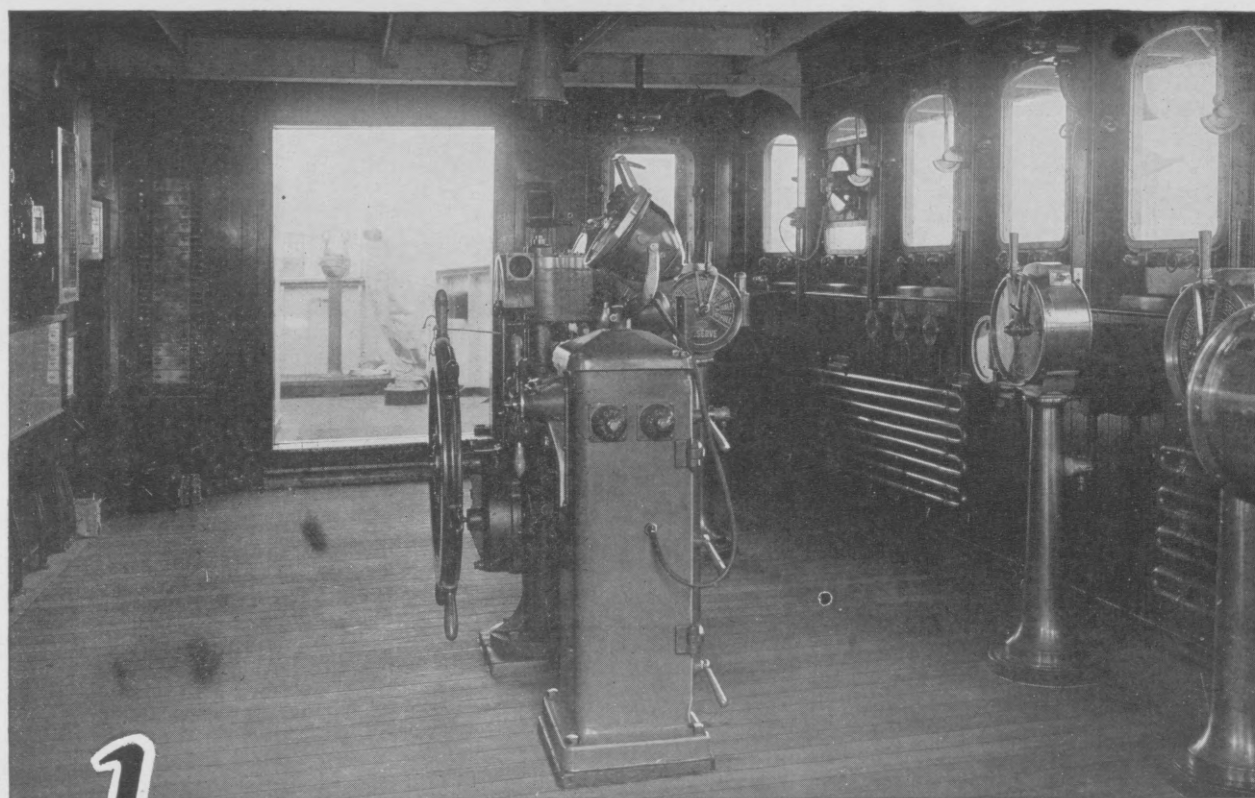
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CHINA

Hong Kong
Shanghai

Standard Oil Company, (N.J.)
26 Broadway
New York, N.Y.



*The MALOLO'S bridge*

Up to the Minute



THE designers and owners of the MALOLO know the importance of safety, accurate navigation and efficient steering. They, therefore, made sure that the Sperry Gyro-Compass, Gyro-Pilot, Helm Angle Indicator, Engine Speed Indicator and High Intensity Searchlight were made a part of this great ship's equipment.

THE SPERRY GYROSCOPE COMPANY

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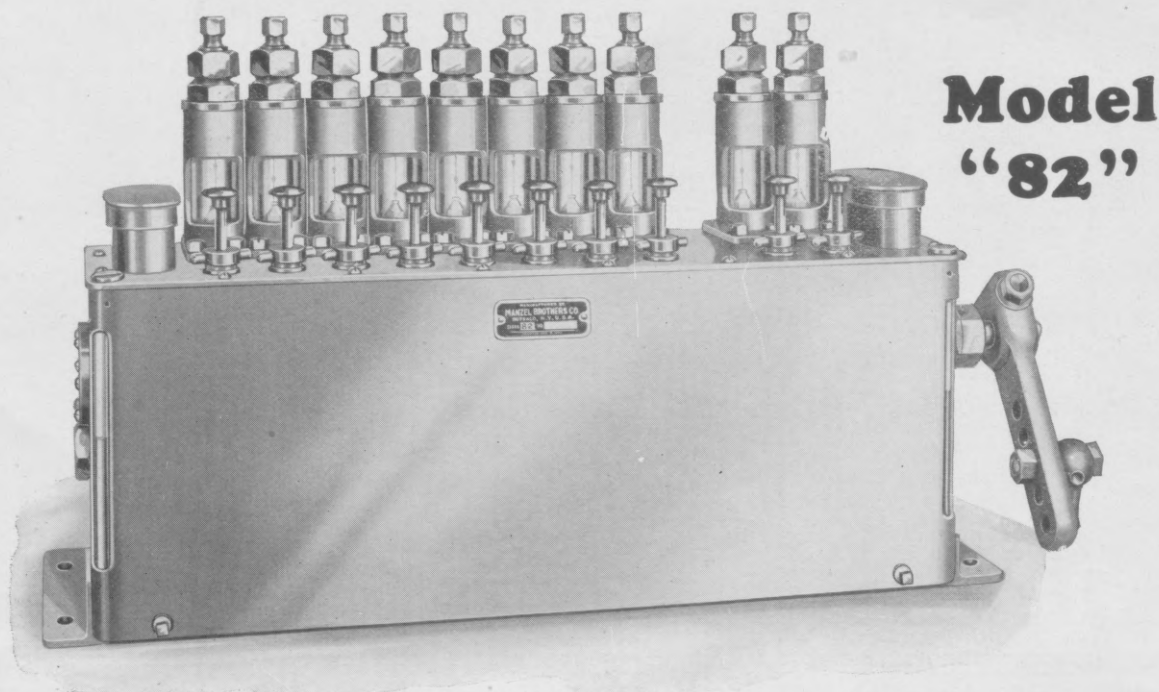
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SAN FRANCISCO

SEATTLE

The "Manzel" Diesel Engine Lubricator



10-feed, Two-Compartment, Model "82" Lubricator

Delivers the Oil to the Engine Cylinders at the Exact Time and Point Desired

In the "Manzel" Diesel Engine Lubricator, Model "82," a great forward stride has been made in the field of Diesel Engine lubrication.

Forcing the oil into the cylinders in accurately measured quantities, it delivers the charge of fresh oil exactly where you want it and at the exact time desired for most effective lubrication.

Due to its unique and original cam action, the oil is injected into the cylinder during a very short period of piston travel, permitting of very accurate timing of the oil delivery.

There is no guess-work regarding the amount of oil supplied to each cylinder, for the actual amount measured out by the lubricator plungers is shown in the sight feed glasses after it has been discharged from the pumping mechanism and has passed all places of possible undetected leakage.

Why not follow the lead of America's principal Diesel Engine builders and lubricate your engines with "Manzel" Diesel Engine Lubricators.

Write for New Catalog No. 82

If you have not received your copy, write for it today. It contains valuable information regarding the lubrication of Diesel Engine cylinders.

MANZEL BROTHERS COMPANY

300-302 Babcock Street

Buffalo, N. Y.

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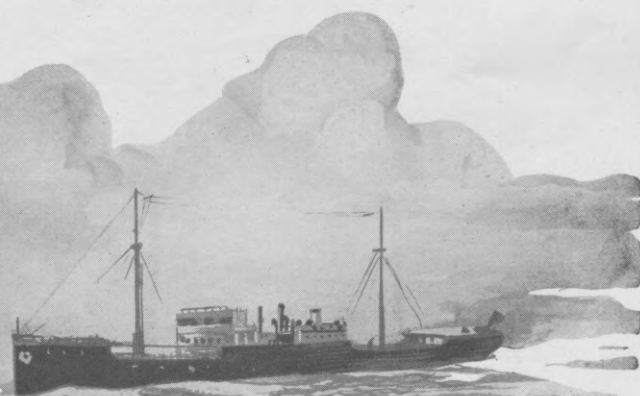
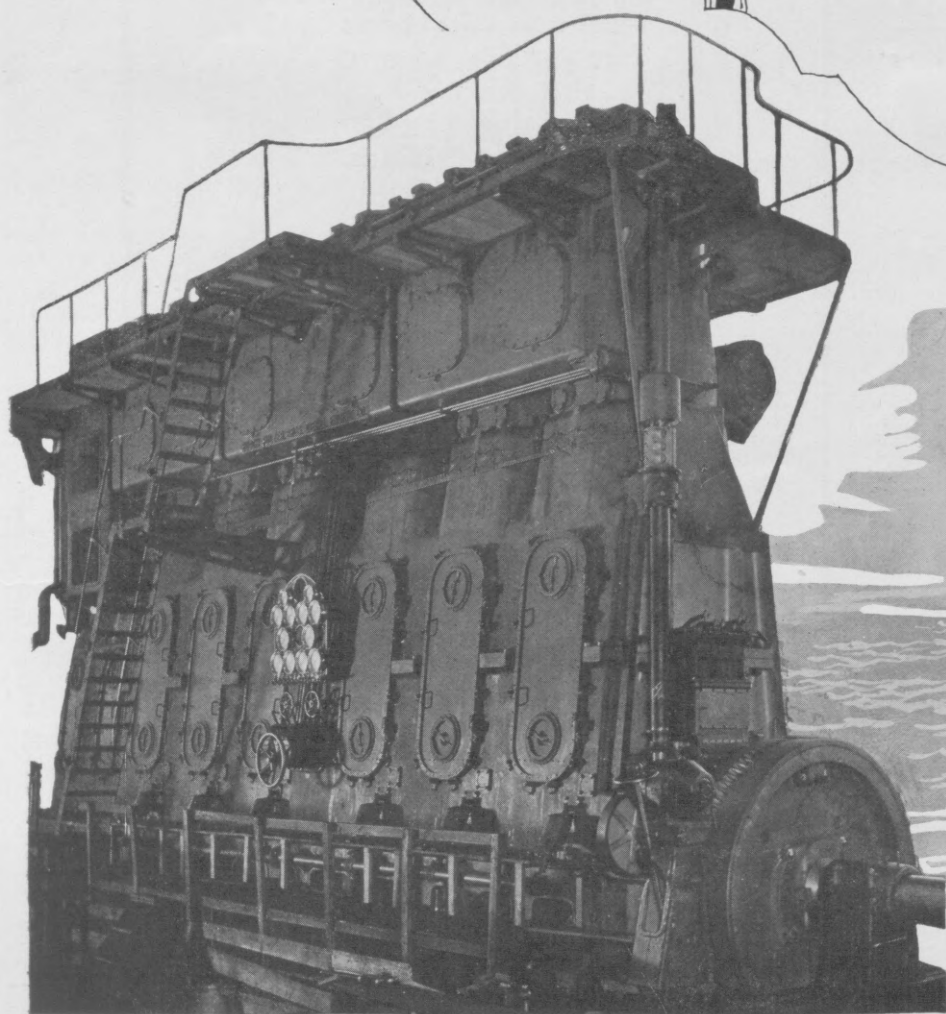
Two Cycle

Single Acting

Patented Port Scavenging

**Maximum
Simplicity**

**Minimum
Upkeep**



BUSCH-SULZER BROS.-DIESEL ENGINE CO.

**Two Rector Street
New York**

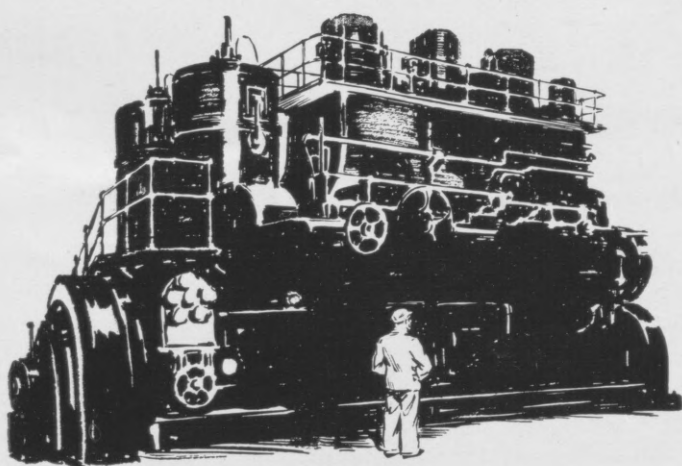
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Willards Serve and Save on Diesel-Driven Ships

Willard Threaded-Rubber Batteries are built for hard jobs. That's why they serve as well aboard ship.

Willards save by helping out at the hoists, pumps and other electrically-driven auxiliary machines when help is needed. And they furnish light in port, doing away with the need for an engine-room watch—and ridding the ship of the noise and vibration that is unavoidable when engines and generators are in operation.



Willard
Type KBR
Battery

This Battery is the Willard Type KBR—with Willard Threaded-Rubber Insulation between the plates. It can be shipped Charged ~~bone dry~~ and need not be prepared for service until the installation is made. All through the life of the battery the Willard Threaded-Rubber Insulation protects the life of the battery plates.

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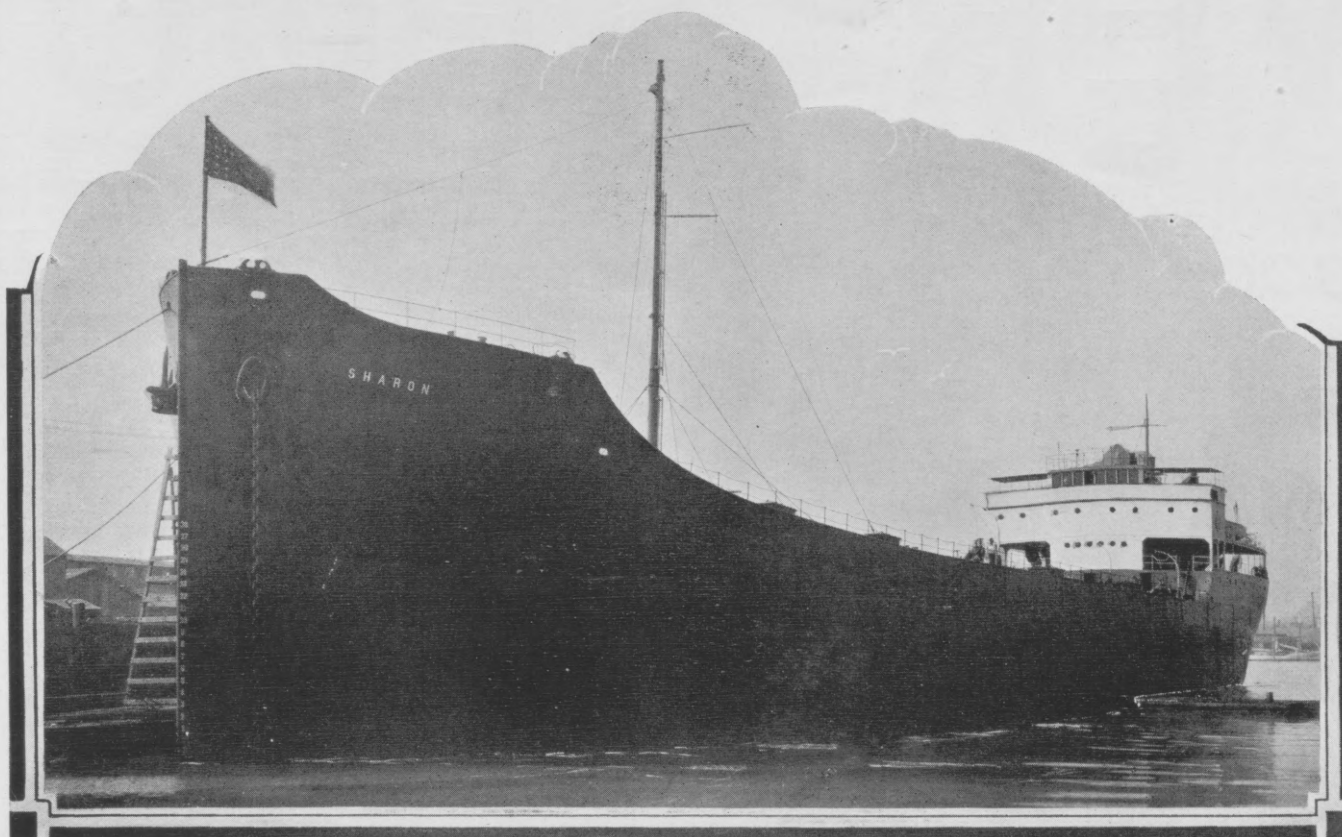
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Willard STORAGE BATTERIES

*The Willard Battery Men
Service All Makes and
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We Converted the "SHARON" ~into the most modern Diesel Electric Ship

The complete Diesel-Electric equipment of the "SHARON", including Ingersoll-Rand Diesel engines, coupled with General Electric propulsion motors, Sperry Gyro-Compass, "Metal Mike," and all operating controls

were assembled and installed at our yards. The ship is operated entirely from the bridge and on trials proved up to a high mark of efficiency, in speed, handling and absence of vibration. She has just been placed in service.

A plant on the Gulf of Mexico completely equipped and capable of handling large jobs with a high standard of workmanship, efficiency and speed.

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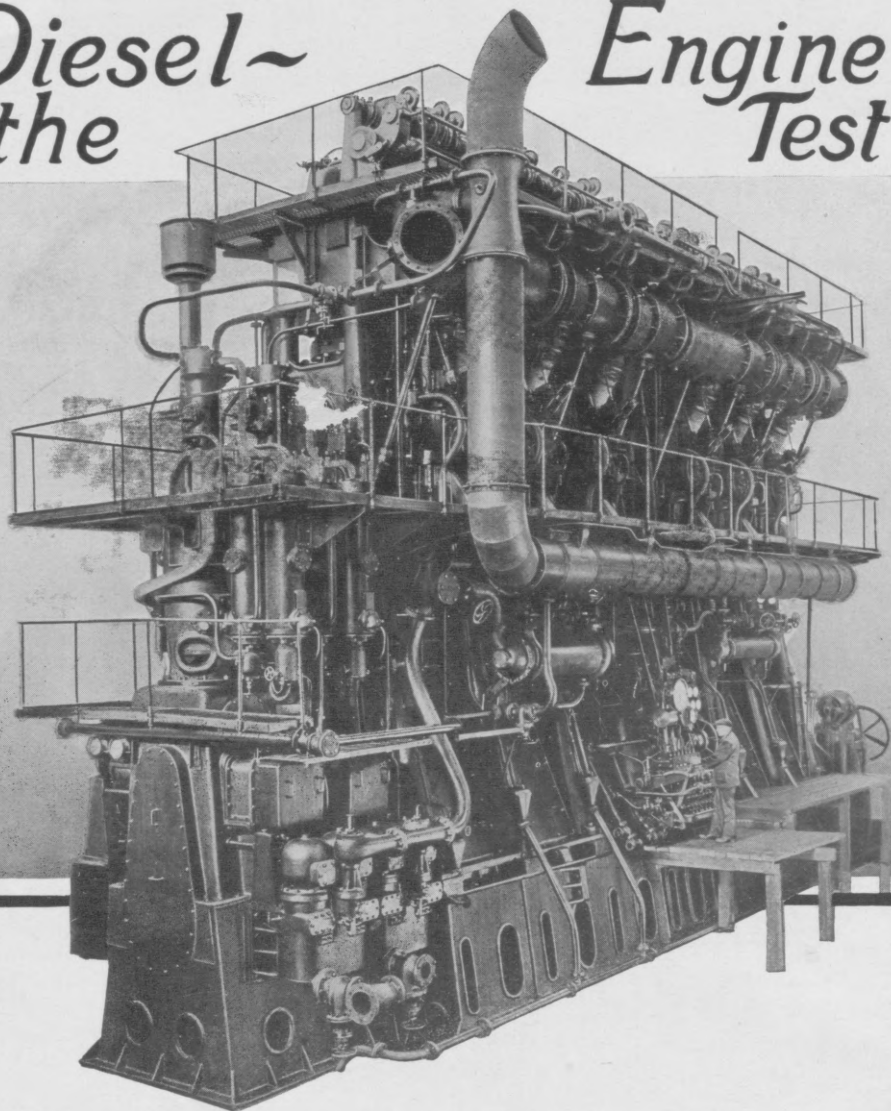
Alabama Dry Dock & Shipbuilding Co.

Cable Address "Drydock" :- Mobile, Alabama, U. S. A.

WERKSPoor

*The Diesel-
stood the*

*Engine that has
Test of Time*



EIGHTEEN years ago the Anglo-Saxon Petroleum Company ordered its first Werkspoor Diesel-engined motorship, the **VULCANUS**, which was the World's first Diesel vessel to go to sea. Since then it has taken delivery of ten more ocean-going ships powered with Werkspoor four-cycle, single-acting Diesel engines.

Today the Anglo-Saxon Petroleum Company has under construction **SEVEN-TEEN** more Werkspoor Diesel-engined vessels, all of which will be of the

Four-cycle Double-acting type

Meanwhile the veteran **VULCANUS** continues to give excellent service after covering over 1,000,000 miles. Truly the Werkspoor engine has stood the test of time.

Representative for the U. S. A.
William Braat
Evening Post Bldg.,
75 West St., New York City.

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(Formerly New York Shipbuilding Corporation)
Pacific Diesel Engine Company.

WERKSPoor
Amsterdam, Holland

**DOUBLE
ACTING**



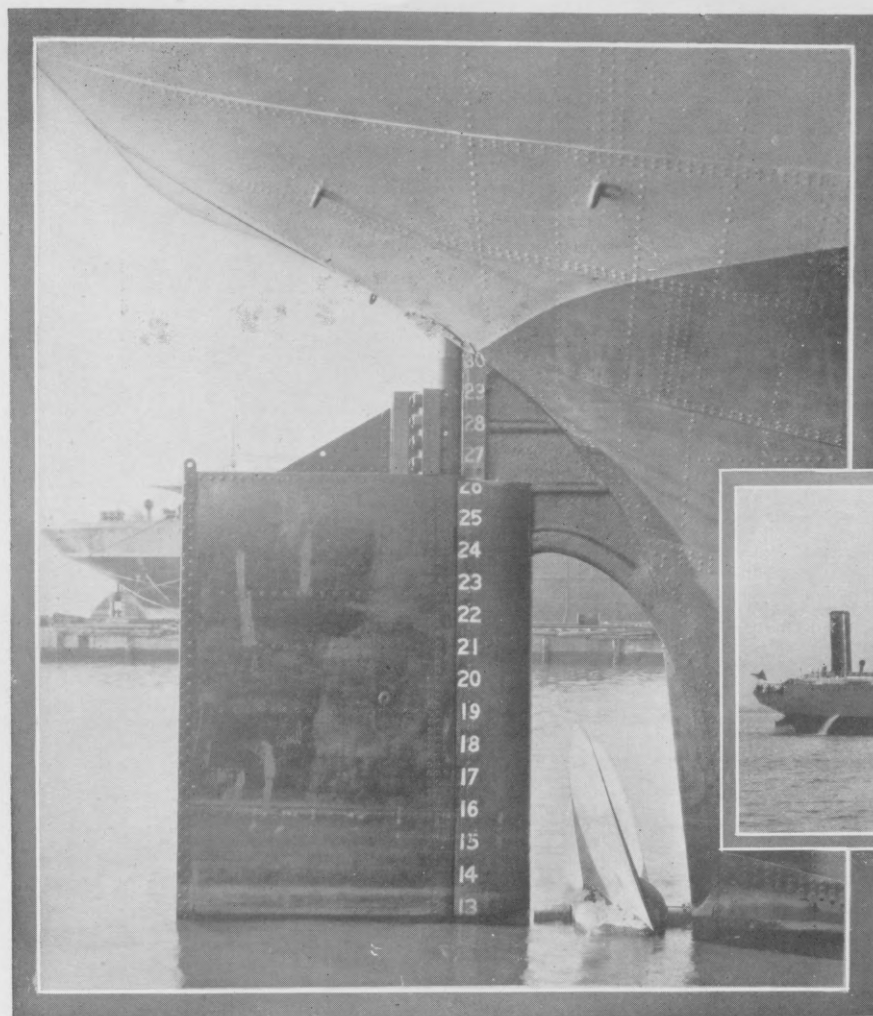
**SINGLE
ACTING**



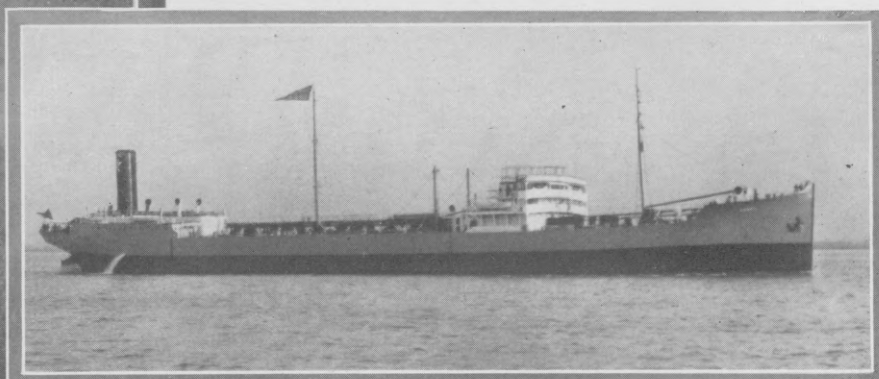
OERTZ



Streamline Rudder



on the
SUNOIL



and on

230 Other Ships

(1,200,000 D.W.TONS)

THE OERTZ streamline rudder has been installed on the Sun Oil Co.'s new motortanker SUNOIL, just completed at the Sun Shipyard, Chester, Pa. The Oertz patent streamline construction prevents yawing, thus increasing the ship's daily direct mileage by 6 to 13%. Other advantages are that 30 to 50% less power is required from the steering; strong stern vibration is practically eliminated; improved steerability, turning radius being less than half of standard rudder.

THE OERTZ rudder has two parts—a fixed forepart about 1/3 the length and a moveable rear part. The greatest thickness is at the pintles. Both parts at all angles of helm always have streamline form. Small angles of helm give the rudder almost exact aerofoil form. This means minimum resistance to the waterflow and the greatest pressure sideways (steering power) even for extreme angles of the helm. The Oertz Rudder is approved by the American Bureau of Shipping, and Lloyds Registry of Shipping.

THE OERTZ rudder is now installed on 230 ships, aggregating 1,200,000 dw. tons. No change in design has been found necessary since the original patents.

COUPON

OERTZ STREAMLINE RUDDER CORP.
Evening Post Building, West Street, New York, N. Y.

I am interested in having you mail me further particulars about the Oertz Rudder, without obligation to me.

Name Title

Company Address



Tanker Herman Falk

equipped with

2600 BHP

**Falk Geared Marine
Oil Engines**

**THE FALK CORPORATION
Milwaukee**

Manufacturers of

Falk Flexible Couplings
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FALK

ERIE FORGE COMPANY

ERIE PENNSYLVANIA

THE reputation of the Erie Forge Company in the forging and finishing of Oil Engine Crankshafts is so well established that Erie and crankshafts are almost synonymous.

But it should also be remembered that there are many other forgings entering into the construction of Oil Engines—Erie forges the other but equally important units with the same care and attention as given to the crankshafts.

Sometimes an Oil Engine Builder requires special alloy metals for the forgings—it makes no difference to Erie—the most complicated of formulas are complied with to the letter.

Rough and Finished Forgings—Steel Castings

Ferry "JACKSON" and

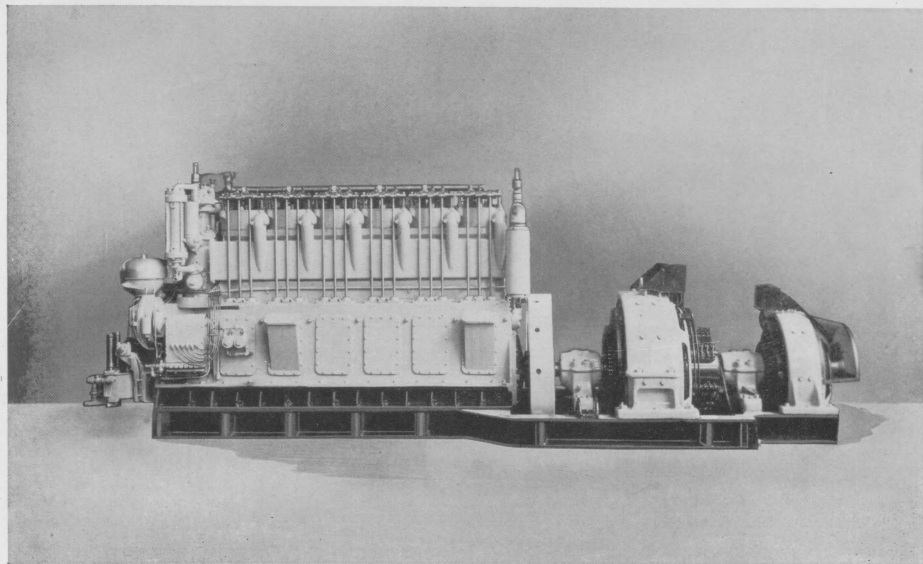


Length, 128 ft. Beam, 40 ft. Draft, 8 ft.

The **WIN**
E N G I N E
C L E V E L A N D

NEW YORK—The Winton Engine Co., 331 Madison Ave. LOS ANGELES—F. G. Bryant, 201 F. W. Braun Bldg.
CLEVELAND—F. C. Erdman Co., Union Trust Bldg. WASHINGTON—R. L. Fryer, 430 Transp't'n Bldg.

her WINTON-DIESEL

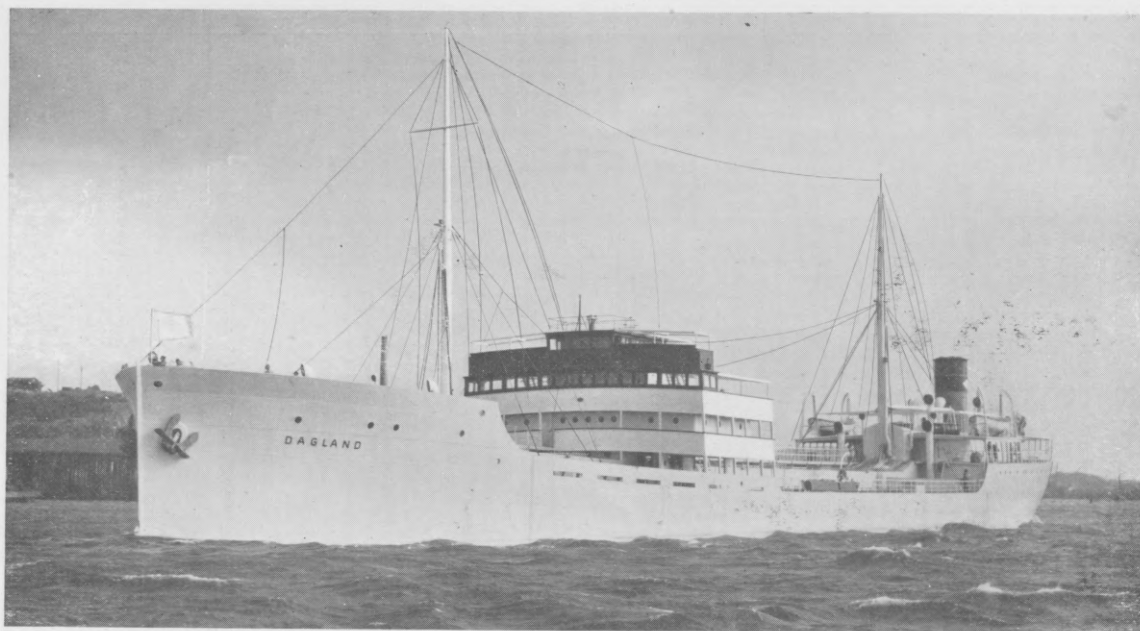


Winton-Diesel, Model 117

T O N
C O M P A N Y
O H I O - - U. S. A.

NEW ORLEANS—Warren C. Graham Co., 411 Godchaux Bldg. SEATTLE—J. O. Larsen, 19 Colman Dock.
BOSTON—Walter H. Moreton Corporation, 1045 Commonwealth Avenue.
MIAMI—Winton Engine Sales Co., Inc., 317 N. E. 1st St., at Biscayne Blvd.

GÖTAVVERKEN MOTORSHIPS



No. 38 THE M. S. "DAGLAND"

9.000 tons d. w.; Owners: Aktieselskapet Ocean, Oslo
Managing Owners: John P. Pedersen & Søn

Date of delivery Sept. 9:th 1927
Power 3.000 I. H. P.
Average speed 11,5 knots
Fuel consumption per 24 hours ... 10,5 tons
Cruising radius 27.000 naut. miles

BUILT AND ENGINED BY:

GÖTAVVERKEN

GOTHENBURG - - - SWEDEN

SHIPBUILDERS, SHIPREPAIRERS
BUILDERS OF DIESELMOTORS
MAIN LICENSEES FOR SWEDEN OF THE
B & W-MOTORS

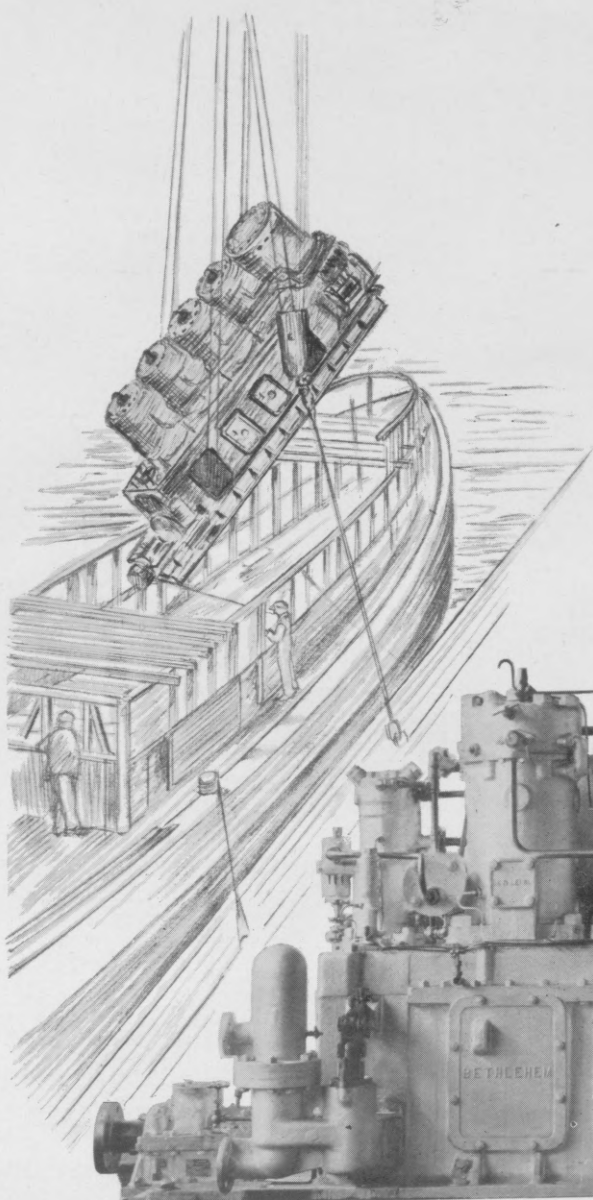
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Nº1 LIFTING CAPACITY **8,000** TONS
Nº2 " " **18,000** "

POSTAL & TEL. ADDRESS: **GÖTAVVERKEN** GOTHENBURG



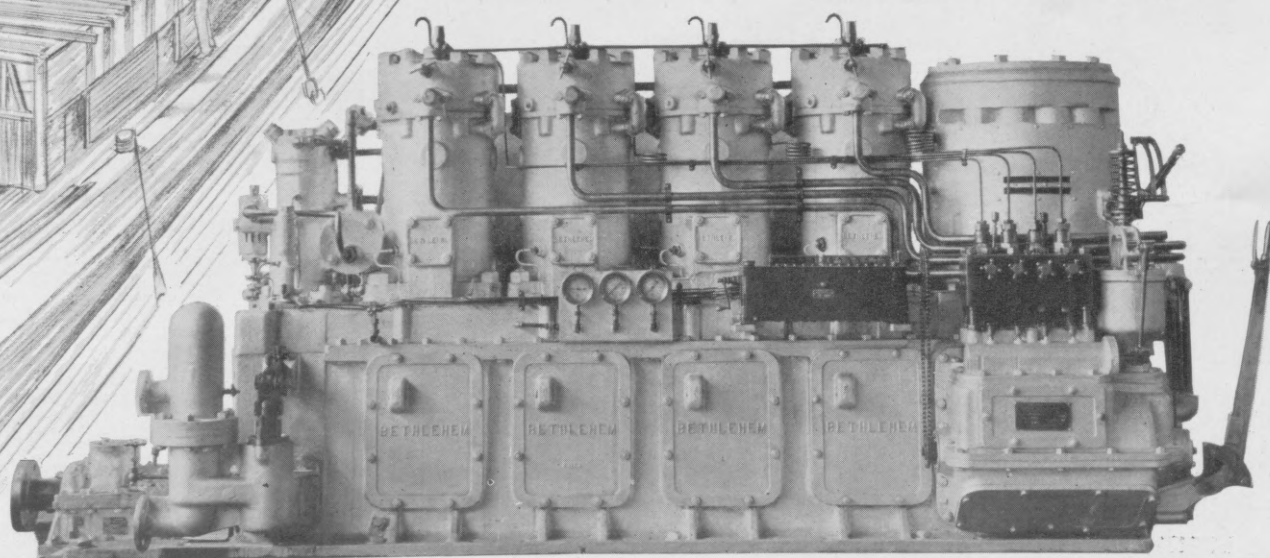
Bethlehem Type M Diesel Engines



The ease with which a Bethlehem Diesel Engine can be installed was strikingly illustrated at the time of the tug Hustler's installation.

The hull was brought alongside the wharf at 9:30 A.M. and at 11:30 A.M. the Engine was in place on its foundation. Time elapsed 2 hours.

The simplicity of installation and the ease and economy of operation are the outstanding features which recommend Bethlehem Type M Diesel Engines as prime movers for small craft and auxiliary power on large vessels.



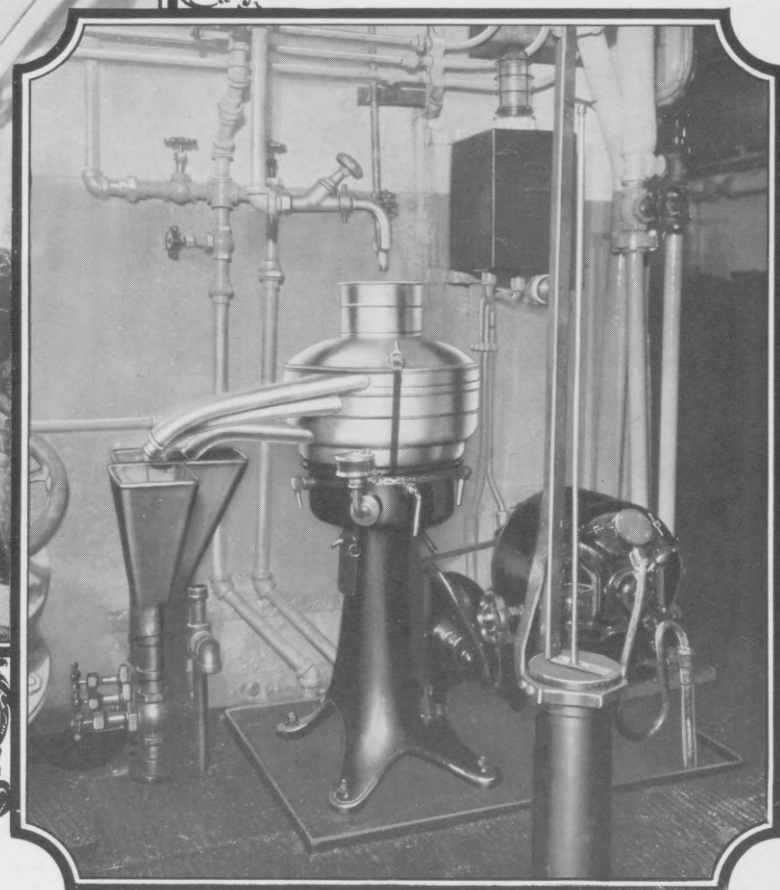
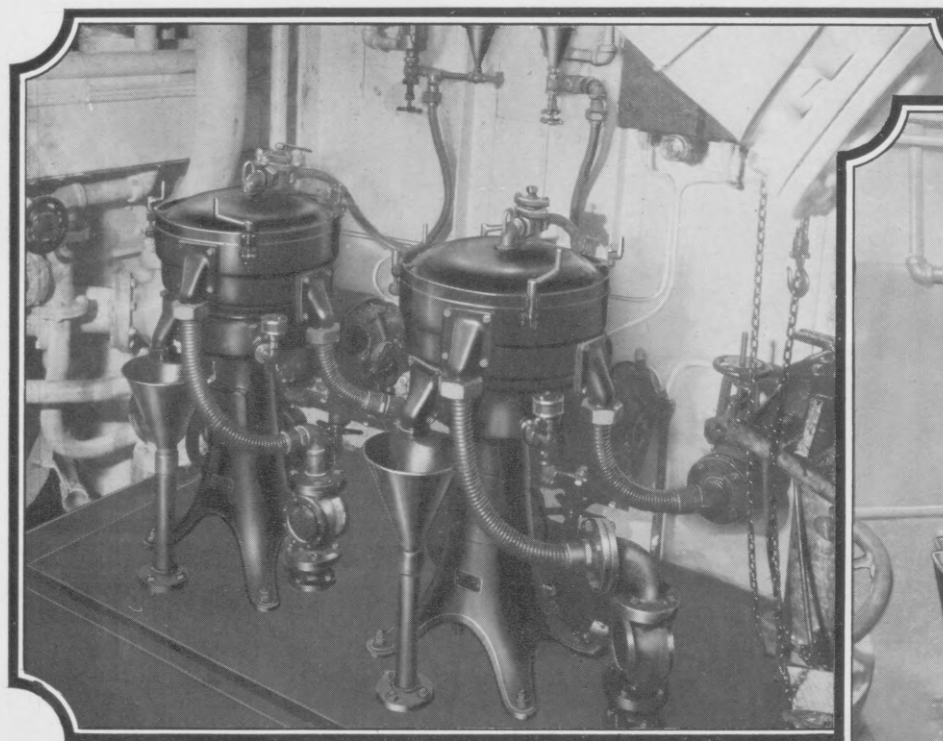
BETHLEHEM STEEL COMPANY, General Offices: BETHLEHEM, PA.

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Cleveland	Detroit	Cincinnati	Chicago	St. Louis	Los Angeles	Seattle	Portland

Bethlehem Steel Export Corporation, 25 Broadway, New York City, Sole Exporter of Our Commercial Products

BETHLEHEM



Fastest

Shipping Board Conversion *Equipped with* DeLaval Oil Purifiers

Three De Laval Oil Purifiers—two of vapor-tight construction for fuel oil—protect the 3680-b.hp. Hoovens, Owens, Rentschler double-acting Diesel engine on the latest and fastest Shipping Board conversion, *M.S. Seminole*. The Purifiers exclude abrasive dirt from the cylinders and bearings—keep the oil dry—remove carbon and sludge from the lubricating system.

Shipping Board engineers know that clean lubricating and fuel oil reduce engine wear, improve operating efficiency, lower repair costs, lengthen engine life. They have learned, too, that centrifugal purification is positive and unfailing at sea or in

port—that it removes finely divided impurities and moisture as well as heavy solids, thereby keeping the oil in perfect condition *always* and eliminating waste.

Hence centrifugal machines were specified for all the twelve Shipping Board Diesel conversions now completed or under way.

Bulletin 106-M tells about the latest practice in purifying either lubricating or fuel oil. Write for a copy today, outlining your own problem.

THE DE LAVAL SEPARATOR COMPANY
165 Broadway, New York 600 Jackson Blvd., Chicago
DE LAVAL PACIFIC COMPANY, San Francisco
ALFA-LAVAL CO., Ltd., 34 Grosvenor Road, London, S.W. 1

De Laval Oil Purifiers

Types for Lubricating Oil and Fuel Oil

all over the world Madison-Kipp Lubricators are leading

Why

Fact 1

Positive Valve Action — but VALVELESS

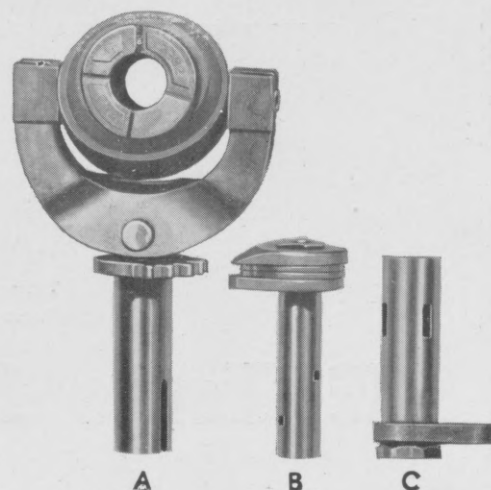
Valveless—but with a valve action so positive that failure to function would be a violation of mechanical laws.

Positive—because the Madison-Kipp pumping principle is based entirely on registering ports.

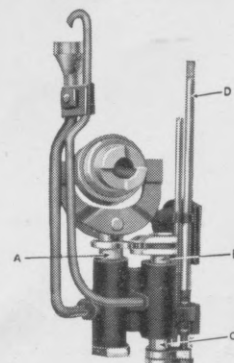
As the grooved or ported pumping plungers travel up and down they turn in ported cylinders. Because of the absolute mechanical control of the motion, oil must be pumped when the plunger grooves and ports register with the cylinder ports. It cannot be pumped when they do not.

Lubrication data, lubrication service and cooperative experimental work in lubrication is always available to engineers and manufacturers.

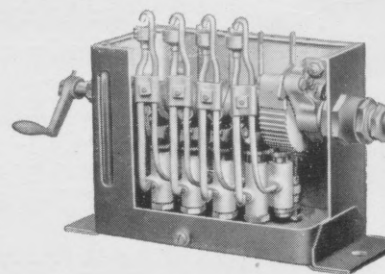
70% of all Oil Engines built in America and an appreciable percent of foreign built engines are equipped with Madison-Kipp Lubricators.



The basic elements of the Madison-Kipp pumping unit. The double eccentric with its universal jointed yoke and grooved pumping plunger—the suction and sight feed plunger and metering sleeve both showing their ports.



The pumping parts assembled into a complete pumping unit. "A" is the grooved pumping plunger, "B" the suction and sight feed plunger and "C" its metering sleeve.



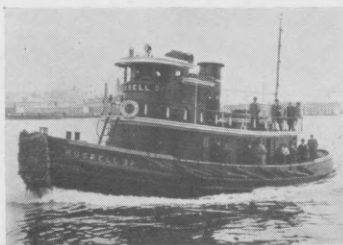
Units assembled in a tank with one type of drive mechanism. In these three illustrations every important operating part is clearly shown.

There is nothing complicated either in design or operation, nothing apt to go wrong and very little to wear in the Madison-Kipp Lubricator.

Madison-Kipp CORPORATION **Lubricators**
Lubrication Specialists Since 1898 *Madison, Wisconsin U.S.A.*



EDNORINA



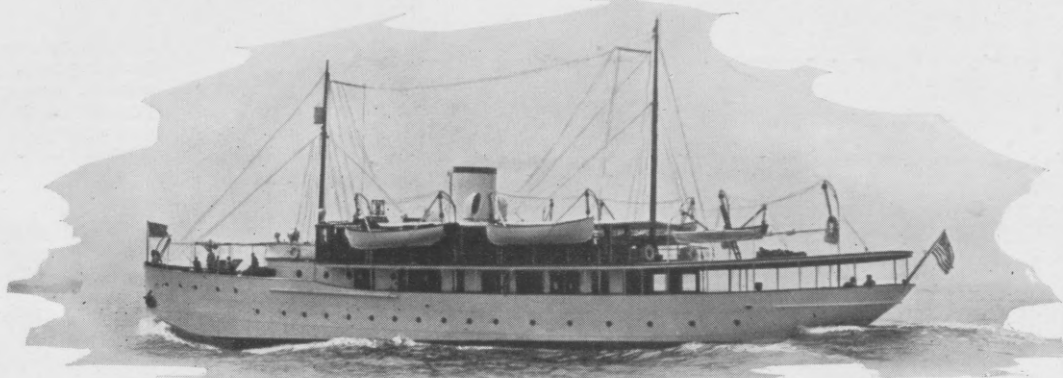
RUSSELL III



ELDOMA

Three of the many Maxim Silenced tugs—two of the above operate in Puget Sound, the third, RUSSELL III, operates in New York Harbor.

If Tugs Have Maxim Silencers,



The SUMAR is a typical example of the trend toward Maxim Silenced yachts. Many others are similarly equipped

Yachts Most Certainly Should

ONE would hardly expect tug-boat captains to fully quiet their Diesel engines for the mere pleasure of gliding silently over the water.

They use Maxim Silencers because of the greatly increased safety.

Are yachts more immune to the dangers of fog and darkness than tugs? Hardly!

Full operating silence is essential for safe cruising. This can be had *only* by means of Maxim Silencers.

That's why yacht owners insist upon them.

Maxim Engineers are ready to co-operate with architects and builders on this most important phase of yacht design — the Silencing phase.

The time to start is before the keel is laid or remodelling started.

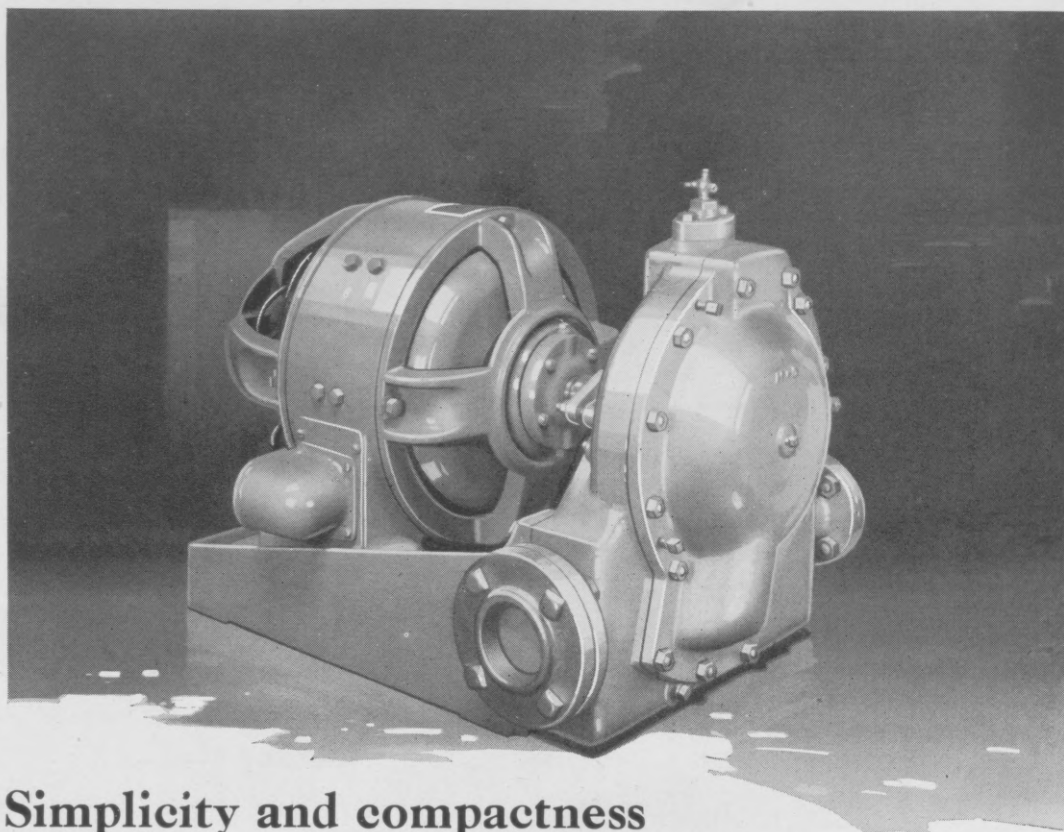
THE MAXIM SILENCER COMPANY
Hartford, Connecticut
Agencies in principal cities.

[[Maxim Silencers Smash Noise]]
[[Mufflers Can Only Dent It]]

For oil and gas engines, air compressors, uniflow steam engines, positive pressure blowers, reducing and safety valves and other equipment having noisy intakes or exhausts

MAXIM SILENCER

Reg U.S. Pat. Off.



Simplicity and compactness distinguish this centrifugal

Jennings Pumps are supplied in capacities and pressures suitable for use as:

Salt and fresh water cooling pumps

Engine room bilge pumps

Fire and bilge pumps

Salt and fresh water sanitary pumps

Fresh water service pumps

Deck pumps

There is only one stuffing box—the pump impeller being mounted on an extension of the same shaft that carries the motor armature.

No bearings are in the pump casing. The side head can be quickly unbolted and the working parts inspected without breaking piping connections or disturbing shaft alignment. Or the impeller can then be taken out without touching the packing or bearings.

A marked simplicity is noticeable in design and construction. A simplicity which makes the Jennings Centrifugal Pump most dependable. Its compactness permits installation in any convenient or out-of-the-way location.

Standard high speed motors are used. In this way the better efficiency is obtained which high speeds make possible.

Please use the coupon in writing for further information.

NASH ENGINEERING COMPANY
134 Wilson Road So. Norwalk, Conn.

Jennings Pumps



MAIL THIS COUPON ~ TODAY

Nash Engineering Co.,
134 Wilson Road, South Norwalk, Conn.

☐ Send bulletin on Jennings Centrifugal Pumps for marine service.

☐ Also recommendations for handling.....

g.p.m.....against.....lbs. per sq. in. pressure.

Name..... Address.....



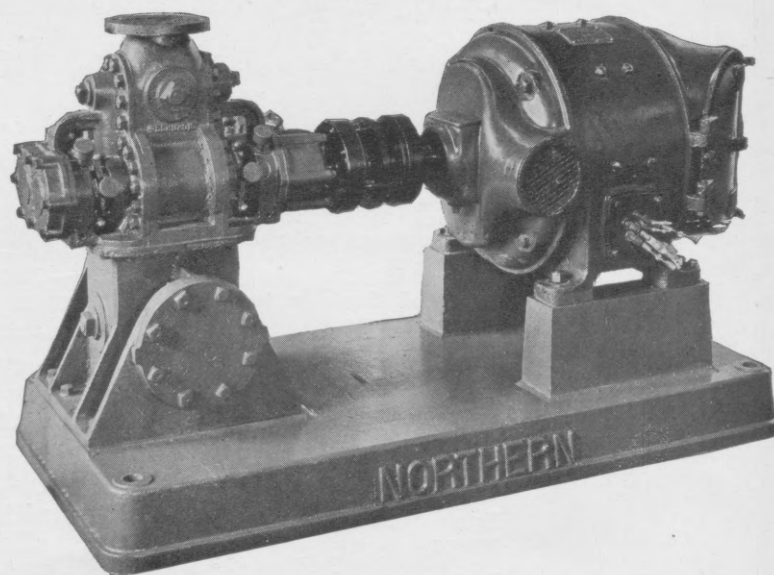
Pumps on the J. H. Senior

Reprint from MOTORSHIP April, 1924

“BECAUSE of a seven years’ reputation for manufacturing reliable and high-grade rotary pumps, Northern Fire Apparatus Company’s pumps were adopted by the Standard Oil Co. of N. J. for its latest Diesel-driven tanker J. H. SENIOR after careful checking by the Company’s engineers.”

THE following is a list of pumps on this vessel:

- Three cargo-pumps, with 35 h.p. motors.
- One fire and general service pump, with 25 h.p. motor.
- Two circulating-water pumps with 7½ h.p. motors.
- One sanitary pump with 3 h.p. motor.
- One fuel-oil transfer pump with 3 h.p. motor.
- One bilge pump with 2 h.p. motor.



This Company has continued buying Northerns since the J. H. SENIOR went into commission, and we have added several other Oil Companies to our list of Satisfied Customers since then.

Pumps for all services from 25 gallon Transfer to 4200 Barrel Cargo duties.

NORTHERN PUMP CO.

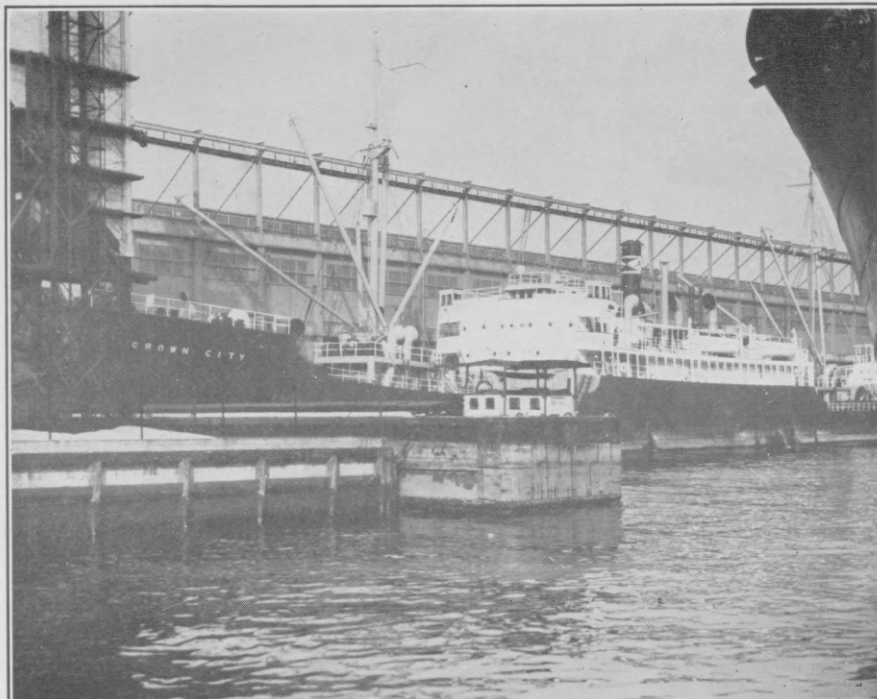
Division of Northern Fire Apparatus Co.

MINNEAPOLIS, MINNESOTA, U. S. A.

Representatives in:—NEW YORK, CLEVELAND, DETROIT, CHICAGO, NEW ORLEANS, HOUSTON, SAN FRANCISCO,
LOS ANGELES, SEATTLE, BOSTON, PITTSBURGH, ST. LOUIS, BUFFALO, BALTIMORE

U. S. SHIPPING BOARD
M.V. "CROWN CITY"

Operated by
ROOSEVELT STEAMSHIP
COMPANY.



"CROWN CITY" MAKES GREAT RECORD ON 25,641 MILE TRIP!

Lubricated with TEXACO URSA OIL for Diesel Engines

"Not One Penny for Engine Repairs"

The recently converted "Crown City," of the U. S. Shipping Board, has *again* demonstrated the remarkable lubricating efficiency of TEXACO URSA OIL for Diesel engine lubrication.

This ship completed its maiden trip as a motor vessel: A 25,641 mile trip voyage, with the longest stretch without stop (Panama to Brisbane) 7,719 miles.

Average for the 7,719 miles.....11.5 knots

Average for round trip of 25,641 miles.....10.7 knots

The "Crown City" is driven by a 3,000 H. P. McIntosh & Seymour Single acting 4 cycle air injection Diesel engine, lubricated as follows:—

CYLINDERSTEXACO URSA OIL HEAVY
AIR COMPRESSORS..TEXACO URSA OIL
BASE LUBRICATION.TEXACO ALGOL OIL

(Texaco Algol oil has the same characteristics as URSA—only lighter in body.)

TEXACO URSA OIL is a clear, clean, pale colored oil; and, as this performance demonstrates, it has the proper viscosity for work.

As it has an exceptionally low pour test it will not clog oil pipes, even when exposed to low temperatures.

It clings to the surfaces of cylinder walls and piston rings—maintains compression, enabling easy starting and delivery of FULL POWER.

Ask to see a sample of TEXACO URSA OIL—the oil that was used on a 25,641-mile round trip "without one penny for engine repairs."

STOCKS KEPT AT PORTS THROUGHOUT THE WORLD.



THE TEXAS COMPANY

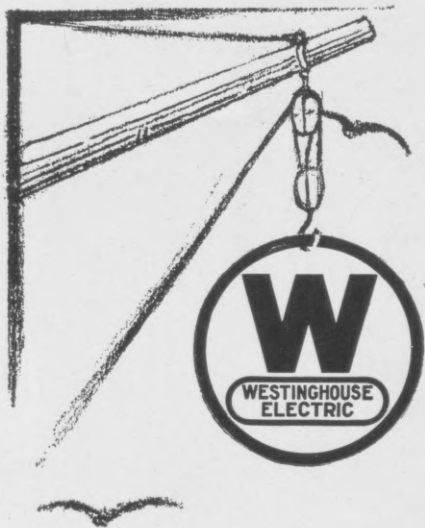
Texaco Petroleum Products

Dept. VD.

17 Battery Place, New York City

Offices in Principal Cities





Service

IN perhaps no other branch of industry does service assume such importance as in the marine field. Ships must maintain schedules or heavy losses ensue, and at the same time the service must be absolutely dependable for the protection of life and property at sea.

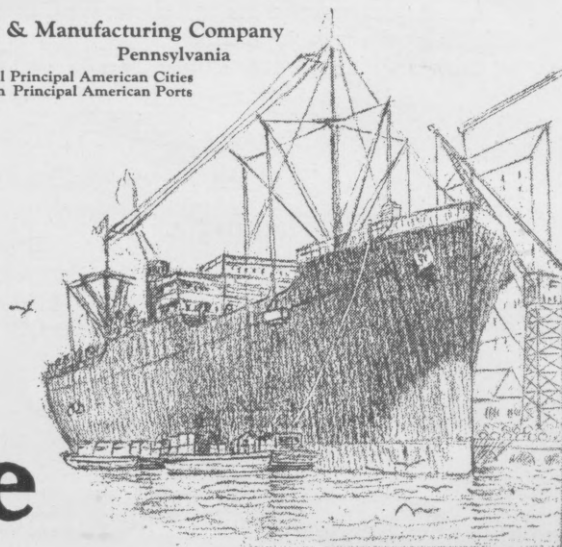
Westinghouse, by virtue of its enormous resources, is particularly fitted to render quick and dependable maintenance and repair service. In the principal ports of the country Westinghouse has excellently equipped and stocked marine service shops, manned by efficient engineers and mechanics, specially trained in marine work.

In addition to this highly specialized marine service department, there is the general Westinghouse Service organization with representatives in all important cities, capable of handling the majority of marine service calls.

Besides casualty service, Westinghouse also provides specialists to superintend installations and instruct engineers in operation and ordinary maintenance.

Inspections of Westinghouse apparatus by these specialists upon arrival of vessels in port is another branch of this extensive service. The importance of this feature lies in the discovery of the necessity for minor adjustments or repairs which obviates serious casualties with their attendant expense and inconvenience.

Westinghouse Electric & Manufacturing Company
East Pittsburgh Pennsylvania
Sales Offices in All Principal American Cities
Service Stations in Principal American Ports



Westinghouse

X93649

ELECTRIC FERRIES, INC.
 GRAYBAR BUILDING
 43RD STREET AND LEXINGTON AVE.
 NEW YORK

November 1, 1927

Carroll D. Winslow
 President

The New London Ship & Engine Co.,
 247 Park Ave.,
 New York, N. Y.

Dear Sirs:-

Att: Mr. P. L. Sutphen

Knowing that you will be interested in the recent survey which we carried out in our six Diesel Electric Ferry Boats, we take pleasure in advising you of the general results obtained.

Our Naval Architect, Mr. Eads Johnson, undertook this investigation and, after a thorough examination of all working parts, found the Nelseco engines to be in excellent condition. We are also pleased to say that since the inauguration in November, 1926, of our ferry service between West 23rd Street, New York City and Weehawken, New Jersey, our boats have at no time been delayed due to engine troubles, and that our maintenance charges have been unusually low.

The operating economies which have resulted by the use of Diesel-Electric drive, have more than convinced ourselves of the many desirable features of this type of propulsion for our service.

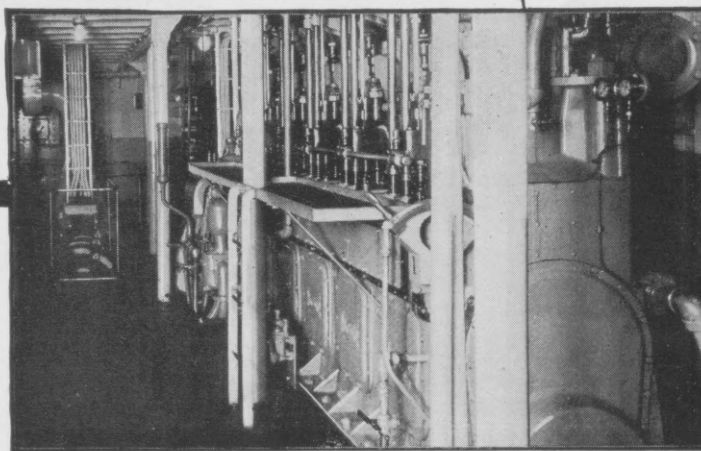
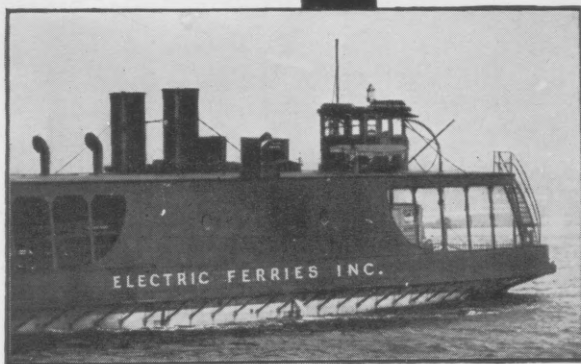
Yours very truly,

ELECTRIC FERRIES, Inc.

Carroll D. Winslow
 President.

The "Charles W. Culkin,"
 a Nelseco-powered unit of
 the Electric Ferries, Inc.,
 fleet running between W.
 23d St., New York City and
 Weehawken, New Jersey.

Engine room of the
 "Governor Moore," another
 of the Electric Ferries, Inc.,
 boats. The "Governor Moore"
 (length Over All, 155 ft.;
 Beam, 48 ft.; Draft, 8 ft. 2
 in.) is powered with 2
 350 B.H.P. at 280 R.P.M.
 type 6 M1-18 Nelseco
 Diesel engines. Speed,
 12.8 miles per hour.



"Unusually low maintenance"

AFTER a year's experience with Nelseco Diesel Engines, Mr. Carroll D. Winslow, President of Electric Ferries, Inc., is "more than convinced" of Diesel advantages. His Nelseco Diesels have given "unusually low maintenance charges"

and "freedom from engine trouble."

Let us know what type of boat you own and we will forward operating figures on similar Nelseco-engined vessels. Nelseco Engineers will be glad to call and discuss your power problems.

NEW LONDON SHIP AND ENGINE COMPANY
 Groton, Conn., U. S. A.

Chicago Representative
 H. JACOBSEN
 25 North Dearborn Street

New York Sales Office
 247 Park Avenue, New York City

West Coast Representative
 KING-KNIGHT CO.
 Seattle, San Francisco, Los Angeles

NELSECO

Original licensees from and collaborators with M. A. N. since 1910

Bu-Nite

STEEL BAND

NICKEL ALLOY PISTONS

The main engine of the Diesel Dredge Delaware No. 2 of the American Dredge Company's fleet is an 800 B.hp. Winton Diesel equipped with *Bu-Nite* Steel Band Nickel Alloy Pistons.

Superior performance assisted materially by the use of *Bu-Nite* Pistons is also achieved in the operation of the auxiliary Winton Diesel Engines.

This is but one of the many instances in which *Bu-Nite* Pistons are daily proving their worth under the most severe service conditions.

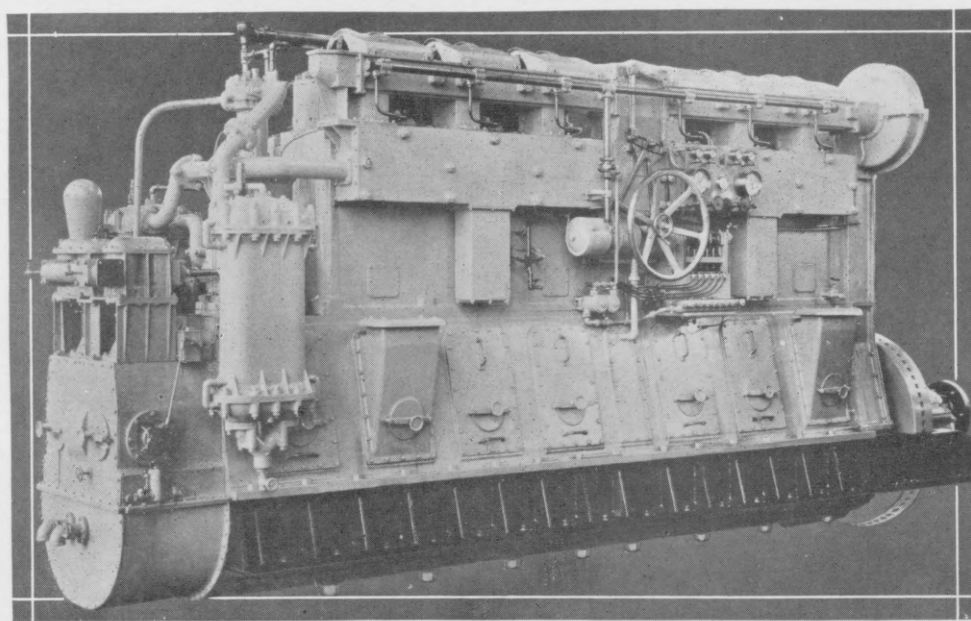


The advantages are:

1. Lighter weight.
2. Lower head temperature.
3. Much lower skirt temperature.
4. Less skirt expansion, either thermally or mechanically.
5. Greater uniformity in the piston pin bearing pressures.
6. Less probability of seizing and scoring the cylinder.
7. Lower inertia forces and therefore lighter crank pin bearing loads.
8. Elimination of indirect cooling systems on pistons up to at least 18 inches in diameter.
9. Absence of piston ring groove wear.
10. High machinability.

SERVING THE AMERICAN DREDGE COMPANY

with WINTON Diesels



Model 128 Winton Diesel Six Cylinder Engine

BUTLER MFG. CO.
Indianapolis, Ind., U. S. A.

Gargoyle D.T.E. Oils lubricate Diesel Engines in every type of Motorship



Motorship KOOLINDA, 4,372 gross tons. Propelled by two 8-cylinder, 4-cycle, single-acting Harland B & W motors, developing 5,000 hp.

~11 years ago and today

Eleven years ago the *Kangaroo*, a pioneer among motor-driven ships, was placed in commission by the Western Australian Government.

1,000,000 miles of operation now stand to her credit.

Even in those early days of the motorship, the peculiar fitness of Gargoyle D.T.E. Oils for lubricating the new type of engine was generally known. Their selection for the *Kangaroo* has never been regretted.

Today the Western Australian Government has placed in commission its latest motorship, the *Koolinda*. To insure correct lubrication of this new vessel high-grade,

uniform Gargoyle D.T.E. Oils have again been chosen.

Whatever type of motorship you operate, old or new, you will find that these well-known Gargoyle D.T.E. Oils:

- ...are of correct body to meet the temperature and pressure conditions;
- ...will separate readily from water and any contamination of the oil;
- ...are economical to use, due to their high lubricating qualities and assurance of long service.

We will be glad to quote prices and arrange for deliveries of Gargoyle D.T.E. Oils at any port here or abroad.



Marine Oils

A grade for each type of service

Vacuum Oil Company

Specialists in the manufacture of high-grade lubricants for every class of machinery. Obtainable everywhere in the world.

New York, U. S. A.

FREIGHT SERVICES

which girdle
THE GLOBE

SAILING under the American flag, freight services operated for the United States Shipping Board, comprising 26 lines and more than 300 ships, leaving from Atlantic Coast, Pacific Coast and Gulf Ports for ports in the United Kingdom, Irish Free State, Continental Europe, South America, the Orient, Dutch East Indies, Australasia, India and Africa, have aided materially in opening up new markets for merchandise and giving added impetus to the foreign trade of hundreds of progressive American shippers.



Passenger Services. Included in the services are the speedy passenger vessels of the United States Lines sailing from New York to principal European ports, also the American Merchant Lines ships which sail weekly between New York and London carrying a limited number of passengers at remarkably reasonable rates.

AMERICA FRANCE LINE
Cosmopolitan Shipping Co., Inc.
42 Broadway, New York City
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AMER. AUST. ORIENT LINE
Swayne & Hoyt, Inc.
430 Sansome St., San Francisco, Cal.
Pacific Coast to Australia, New Zealand, Orient, Straits Settlements

AMERICAN DIAMOND LINES
Black Diamond S. S. Corp.
67 Exchange Place, New York City
North Atlantic ports to Rotterdam, Holland, and Antwerp, Belgium

DIXIE UK LINE
Dixie Steamship Co.
Whitney Central Bank Bldg.,
New Orleans, La.
New Orleans to United Kingdom and Irish Ports

AMER. WEST AFRICAN LINE
A. H. Bull & Co., Inc.
40 West Street, New York City
North Atlantic and Gulf ports to west coast of Africa, including Azores, Canary, and Madeira Islands

AMER. MERCHANT LINES
J. H. Winchester & Co., Inc.
17 Battery Place, New York City
Passenger and freight services to United Kingdom ports

AMERICAN INDIA LINE
Roosevelt S. S. Co., Inc.
16 Beaver Street, New York City
North Atlantic ports to Indian ports

ATL. AUSTRALIAN LINE
Roosevelt S. S. Co., Inc.
16 Beaver Street, New York City
New York to Australian ports
Periodically the above two lines combine on an around the world service via the Suez Canal.

DIXIE MEDIT. LINE
Dixie Steamship Co.
Whitney Central Bank Bldg.
New Orleans, La.
New Orleans to Mediterranean ports

GULF BRAZIL RIVER PLATE LINE
Mississippi Shipping Co., Inc.
Hibernia Bank Bldg.,
New Orleans, La.
Gulf ports to Brazil and River Plate ports, east coast of South America

GULF WEST MEDIT. LINE
Tampa InterOcean S. S. Co.
919 Whitney Building
New Orleans, La.
Gulf and South Atlantic ports to Portuguese, Spanish, and North African ports (west of Bizerta)

MISSISSIPPI VALLEY EUROPEAN LINE
Mississippi Shipping Co., Inc.
Hibernia Bank Building,
New Orleans, La.
New Orleans to French Atlantic and Belgian ports

MOBILE OCEANIC LINE
Waterman S. S. Corp.
Mobile, Ala.
Mobile and Eastern Gulf ports to United Kingdom and continental European ports

AM. ORIENTAL MAIL LINE
Admiral Oriental Line
1519 Railroad Ave., South
Seattle, Wash.
Puget S. ports on Pacific to Orient

AMERICAN PALMETTO LINE
South Atlantic Steamship Line
Bay Street, East, Savannah, Ga.
South Atlantic to United Kingdom and continental European ports

AMERICAN PIONEER LINE
Atlantic Division
Roosevelt S. S. Co.
16 Beaver St., New York City
North Atlantic ports to Orient and Dutch East Indies

Gulf Division
Tampa InterOcean Co.
614 Whitney Bldg., New Orleans, La.
Gulf ports to Orient and Dutch East Indies

TEXAS UKAY LINE
Texas Oceanic S. S. Co., Inc.
Cotton Exchange Bldg.
Galveston, Tex.
Texas to United Kingdom ports

TEXAS MEDIT. LINE
Texas Oceanic S. S. Co., Inc.
Cotton Exchange Bldg.
Galveston, Tex.
Texas to Mediterranean ports

YANKEE LINE
Rogers & Webb
110 State Street, Boston, Mass.
North Atlantic to German ports

AMERICAN REPUBLICS LINE
C. H. Sprague & Son, Inc.
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North and South Atlantic ports to Brazil and River Plate ports, east coast of South America

OREGON ORIENTAL LINE
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Porter Building, Portland, Ore.
Columbia River ports on Pacific Coast to Orient

ORIOLE LINES
Consolidated Navigation Co.
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Baltimore, Md.
North Atlantic ports to west coast of United Kingdom and Irish ports

SOUTHERN STATES LINE
Lykes Bros.-Ripley S. S. Co., Inc.
925 Whitney Central Building
New Orleans, La.
New Orleans and Texas ports to German and Holland ports

TEXAS STAR LINE
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925 Whitney Central Building
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Texas to French and Belgian ports

UNITED STATES LINES
45 Broadway, New York City
Passenger, mail, freight services to England, Ireland, France and Germany

For complete information on either freight or passenger services as to rates, ships, dates of sailing, etc., write to

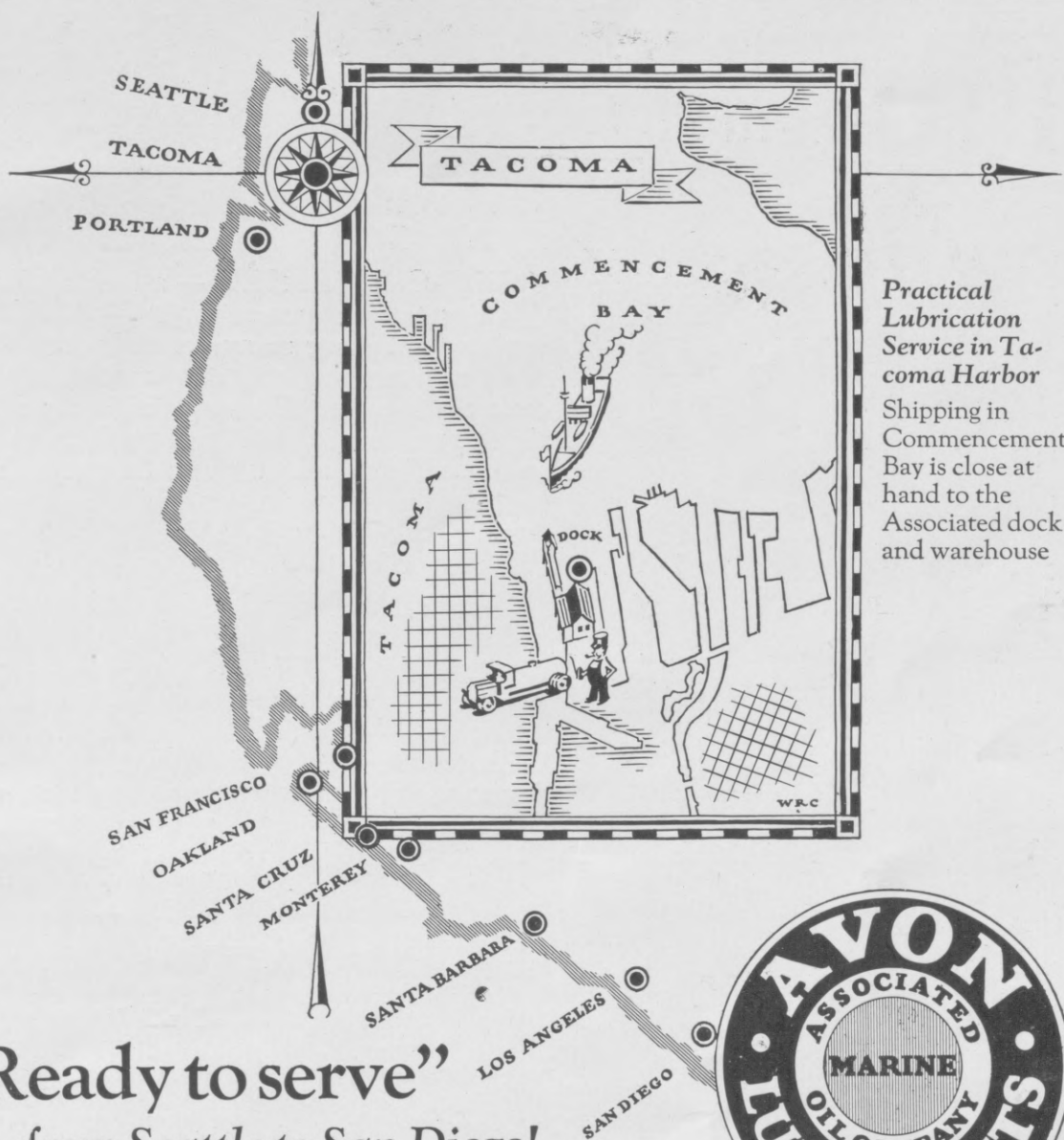
UNITED STATES SHIPPING BOARD



Merchant Fleet Corporation

WASHINGTON, D. C.





“Ready to serve” from Seattle to San Diego!

A CHAIN of Associated “service stations of the sea” covers the ports of the Pacific Coast from Puget Sound to the Mexican border. And wherever you find one of these plants, you will find Associated Practical Lubrication Service at your immediate disposal.

No matter when you call or where you call from, you can be sure of prompt delivery of any marine lubricant that you may need on shipboard.

You will always find a complete stock of Avon *sustained quality* Marine Lubricants on hand with gasoline, distillate and fuel and Diesel oil bunkering facilities at Seattle, Portland, San Francisco, Oakland, Los Angeles Harbor and San Diego.

Call on this “really practical” service day or night. If you wish it your ship will be met as you dock.

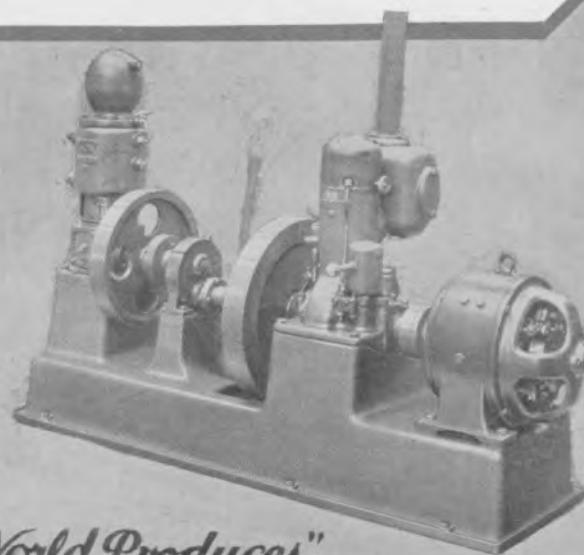
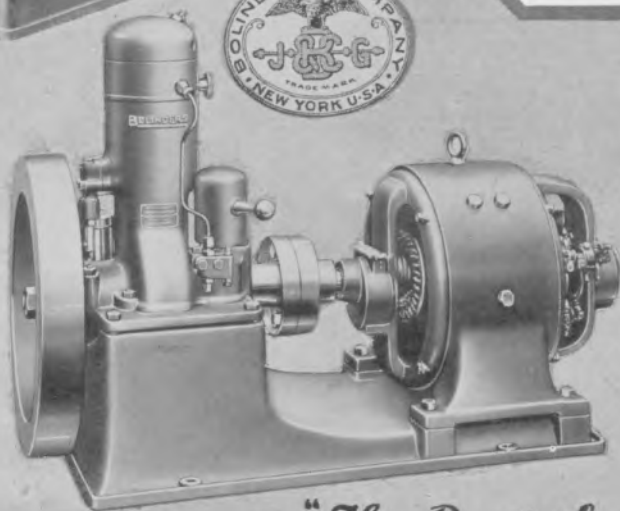
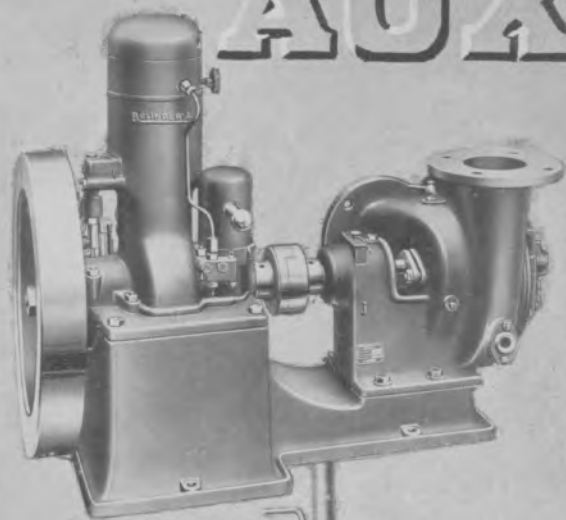
ASSOCIATED OIL COMPANY
Sustained Quality Products



Sustained Quality Marine Lubricants

Avon Mardex
Avon Tropdex
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Avon Nepdex
Avon Marine Engine Oils
Avon Refrigerator Oils
Avon Steam Cylinder Oils
Avon Compressor Oils
Avon Dynamo Oils
Avon Turbine Oils
Cycol for Diesel Engines
Cycol Motor Oils and Greases

DIRECT DRIVE AUXILIARIES



SELF-CONTAINED — all with their own direct-drive power unit — BOLINDER auxiliary sets have many valuable uses on decks or in engine rooms of steam, motor and sailing craft of all types. Pumps, winches, generators, air compressors (individually oil-engine driven or in combination sets) are designed and constructed in accordance with the usual high standards of the BOLINDER oil engine, ensuring reliability.

A motorship may have insufficient electric power for an extra pump, a sailing vessel may have no power for lighting and wireless, a steamer might require an emergency generating set on deck—BOLINDER units fill the gaps. With several low-cost BOLINDER oil-engine driven winches even a steamer can handle cargo while her boilers are being overhauled.

Note the compact design.

Engines and Parts in Stock—Service Dept.

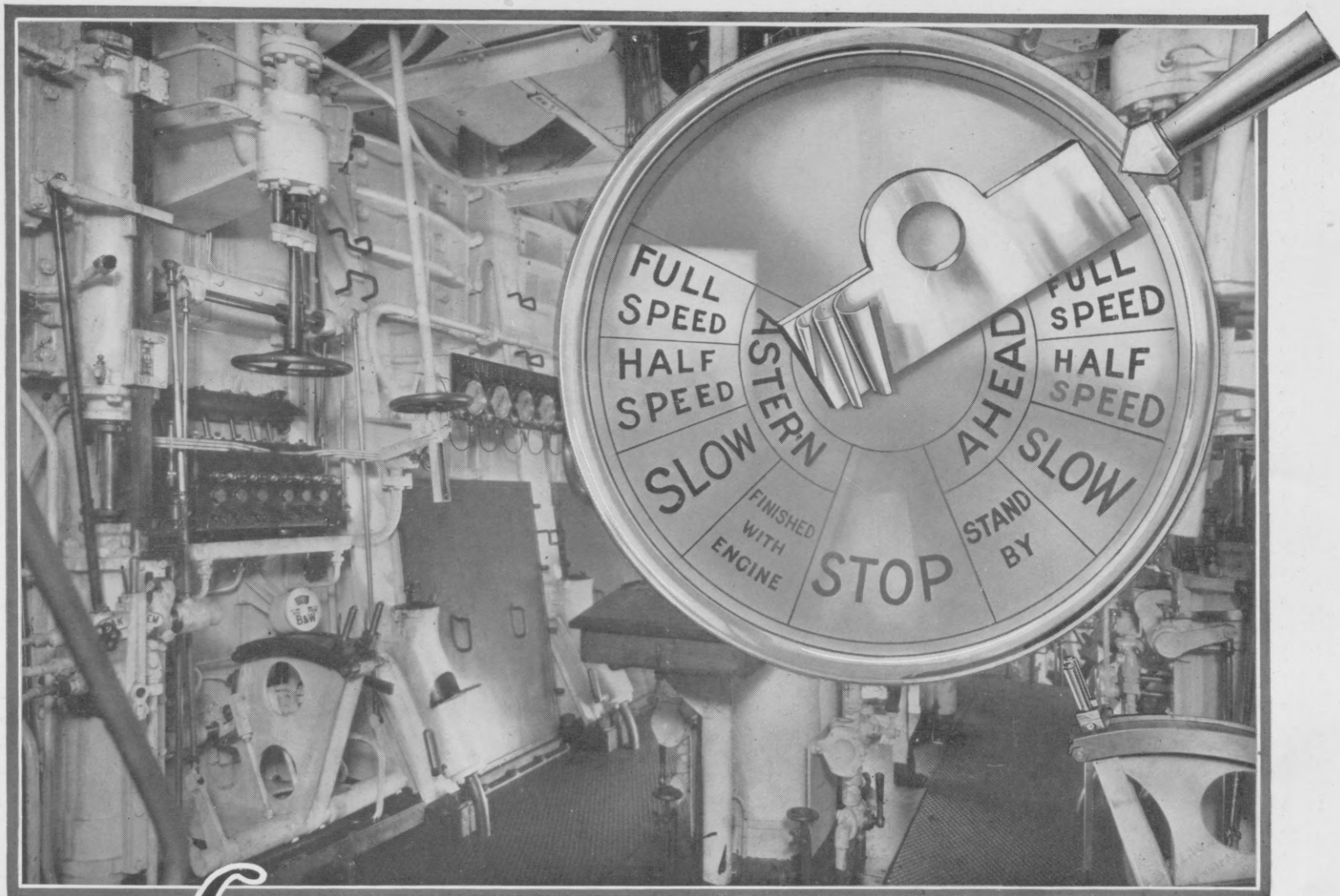
AGENTS

Stauffer, Eshleman & Co., Ltd. Lewis-Brown Co., Inc.
New Orleans, La. Memphis, Tenn., and Helena, Ark.
Davenport-Brooks Corp.,
Fernandina, Fla.

"The Best the World Produces"

BOLINDERS

OIL BOLINDERS COMPANY, Inc.
33 Rector Street New York, N.Y. **ENGINES**



full speed ahead with **LAMINUM**

Speed is an all-important element when making bearing adjustments.

Every minute saved is money and labor saved.

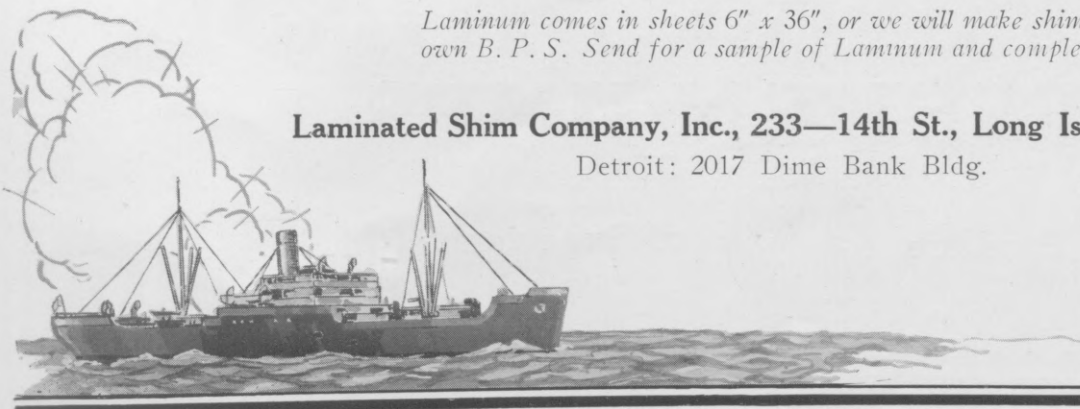
Wherever severe stress or strain has to be met in bearings or adjustments, the use of Laminum is preferred.

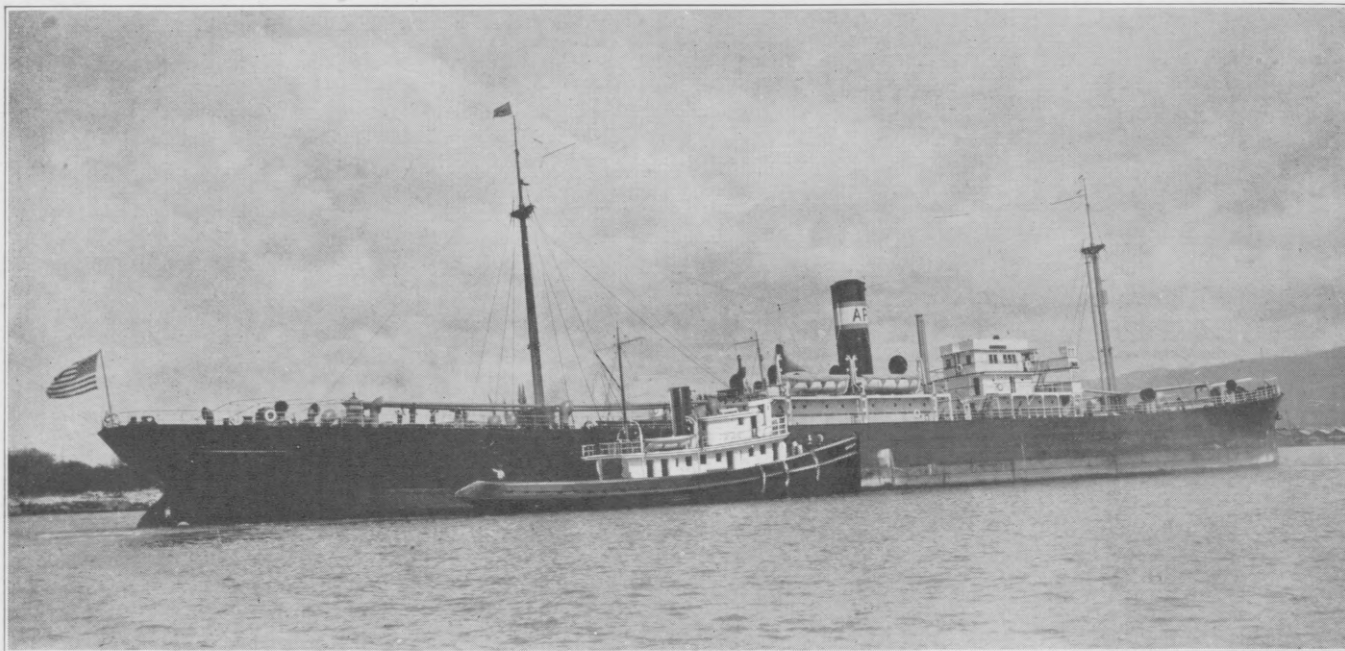
Laminum—the shim that peels, speeds up adjustments and gives a much better adjustment than any other shim . . . full speed ahead with Laminum.

Laminum comes in sheets 6" x 36", or we will make shims to your own B. P. S. Send for a sample of Laminum and complete details.

Laminated Shim Company, Inc., 233—14th St., Long Island City, N. Y.

Detroit: 2017 Dime Bank Bldg.





The MAHOE has seen about as heavy towing as any tug has ever known, yet has the phenomenal record of never having been laid up since she was put into service on May 20, 1925. The MAHOE is shown above towing the HANOVER into port from quarantine in the harbor of Honolulu. The MAHOE is powered with two 360-hp. F-M Diesels.

RECORDS

that simplify the choosing of
a Diesel Engine

SURELY it is not an accident that at least half of the Diesel engines built in this country during the last year were built in the Beloit works of Fairbanks, Morse & Co. What but the world-wide recognition of Fairbanks-Morse quality—the reputation won on the job—could have built this enormous demand?

The record of this engine—the record behind unequaled sales—simplifies your problem of choosing a Diesel. It proves to you that this two-cycle airless-injection engine is the most economical to operate and to maintain—that Fairbanks-Morse quality is in-built quality—quality that means more and more each year the engine is in service.

From the standpoint of manufacturing facilities, from the still more important standpoint of *proved* responsibility, is any manufacturer more worthy of your confidence than Fairbanks, Morse & Co.?

FAIRBANKS, MORSE & CO., Chicago

Branches with service stations in principal ports

FAIRBANKS-MORSE DIESEL ENGINES

The Product



of Experience

AOA 27.133



MARINE

LUBRICATING and FUEL

OILS

One of the following GULF DIESEL ENGINE OILS will meet your requirements—whether 2 or 4 cycle, single or double acting, air or solid injection.

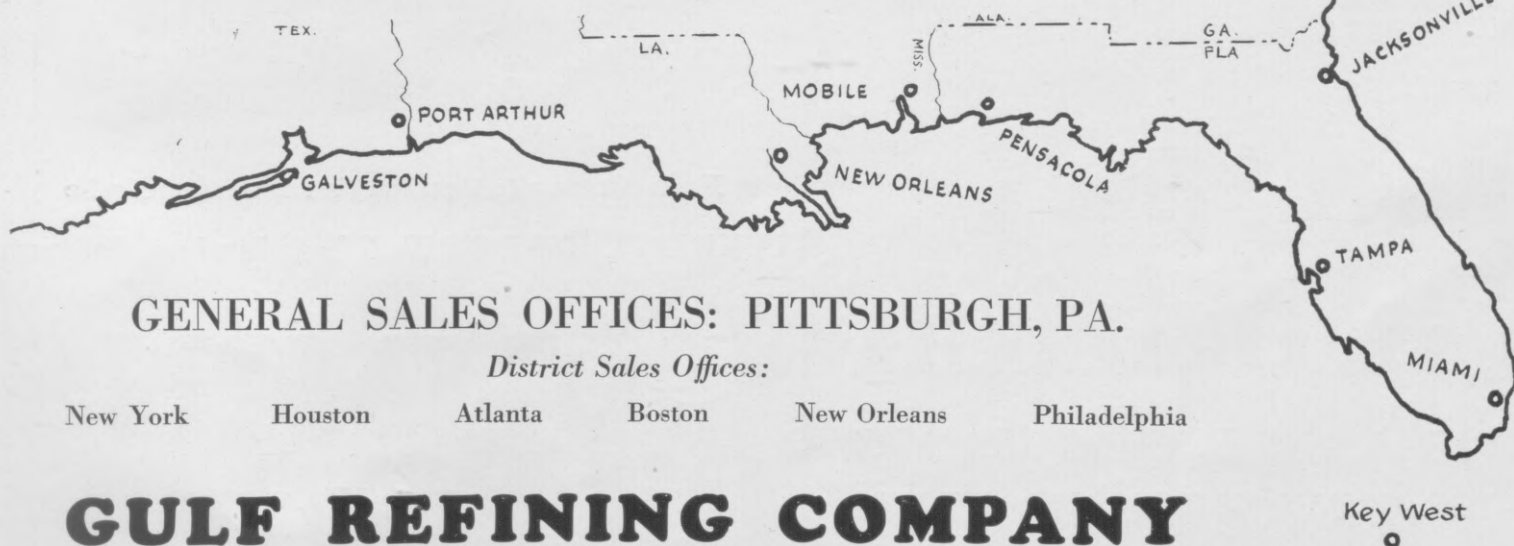
Gulf Diesel Engine Oil—Medium
 Gulf Diesel Engine Oil—Heavy
 Gulf Diesel Engine Oil—Extra Heavy
 Gulf Diesel Engine Oil—Special
 Gulf I C Oil "A"
 Gulf I C Oil "B"
 Gulf I C Oil "W"

For marine air compressors use GULF MARINE AIR COMPRESSOR OIL.

GULF DIESEL ENGINE FUEL is obtainable at the following ocean terminals:

Boston (Beverly)	Jacksonville, Fla.	Philadelphia, Pa.	New Orleans (Gretna) La.
Providence, R. I.	Port Tampa, Fla.	(Girard Point)	Port Arthur, Texas
New York Harbor	Mobile (Magazine	Charleston, S. C.	Galveston, Texas
(Bayonne, N. J.)	Point) Ala.	Savannah, Ga.	

DISTRIBUTING STATIONS ARE MAINTAINED, IN ADDITION, AT MOST OF THE PRINCIPAL ATLANTIC AND GULF PORTS.

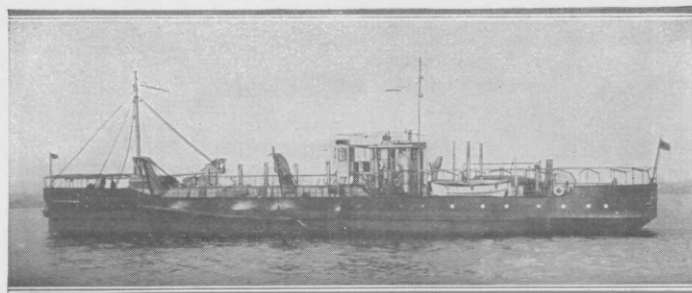


GENERAL SALES OFFICES: PITTSBURGH, PA.

District Sales Offices:

New York Houston Atlanta Boston New Orleans Philadelphia

GULF REFINING COMPANY



Cutless Rubber Bearings with the U.S. ENGINEERS

The seagoing hopper dredge "Willets Point," in the service of the Engineering Department, U. S. Army, is equipped with Goodrich Cutless Rubber Bearings on both of its $9\frac{1}{8}$ " propeller shafts.

While Cutless Rubber Bearings outlast any and all other bearings, their superiority is most marked in dredging service, where the abrasive conditions are so severe that other types of bearing are quickly worn out.

Cutterhead and ladder bearings also, which are subject to rapid wear and heavy strains, should be replaced by Cutless Rubber Bearings.

Cutless Rubber Bearings are especially adapted for use with bronze and Monel Metal shafts.

Write for catalog of Goodrich Cutless Rubber Bearings.

THE B. F. GOODRICH RUBBER COMPANY
Established 1870 Akron, Ohio

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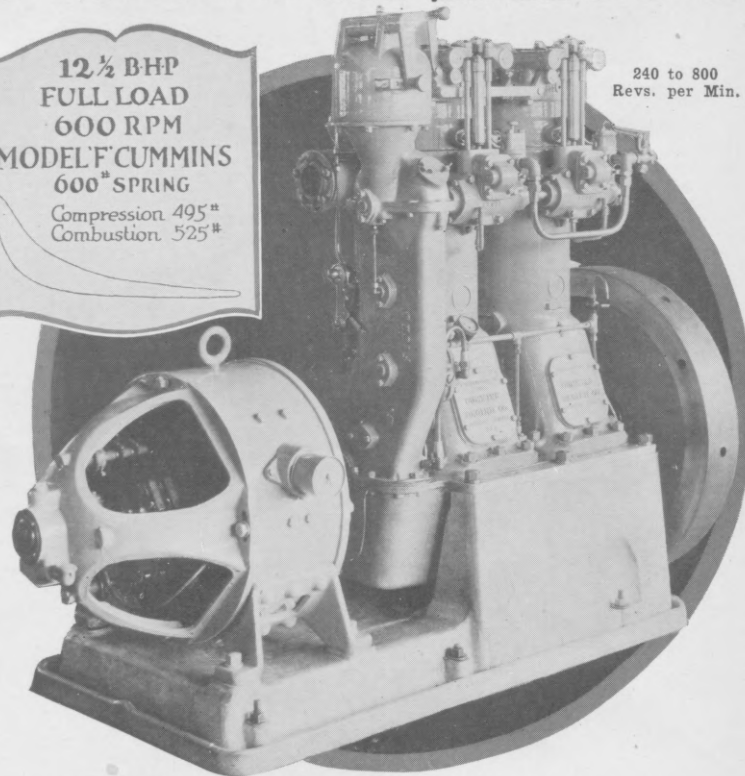
Cutless(Rubber) Bearings

—FOR STERN TUBES AND STRUTS

CUMMINS PERFORMANCE

12½ BHP
FULL LOAD
600 RPM
MODEL F CUMMINS
600" SPRING
Compression 495"
Combustion 525"

240 to 800
Revs. per Min.



Auxiliary Generator Set, and Actual Card Taken from its
Cummins Oil Engine

Indicator Card Tells the Real Story of Five Years Steady Refinement

Clean Combustion—Remarkable Regulation—
High Efficiency—No High Explosion Pres-
sures—No Stoppage from Carbon in Spray
Nozzles—No High Pressures in Fuel Feed
Lines—No Clicking or Pressure Knocks Inside
Cylinders—No Wild Peaks on Indicator Cards

What the Indicator Card Records

Compression Pressure Insures Reliable Cold
Starting—Rise in Pressure of Combustion—
Less (10%)—Uniform Combustion—Low Ex-
haust Temperatures—Efficient Use of Fuel In-
jected—High M.E.P. Characteristics

Fundamentally Right in Principle

CUMMINS ENGINE COMPANY, Columbus, Indiana

CUMMINS Oil Engines

MARINE STATIONARY AUTOMOTIVE

Speed-

HOW serious can be the consequences of damage to a ship's machinery! An overstrained mass of metal revolving at high speed, snapped asunder and hurled through the ship's side. Such an accident, an actual recent happening, caused the sinking of a vessel on the high seas, and the loss of many lives.

Too great importance cannot be attached to the exact control of propeller shaft speeds. For this purpose Weston has developed the Model 44 Magneto Tachometer, the most dependable instrument yet devised for the exact measurement of rotational speeds.

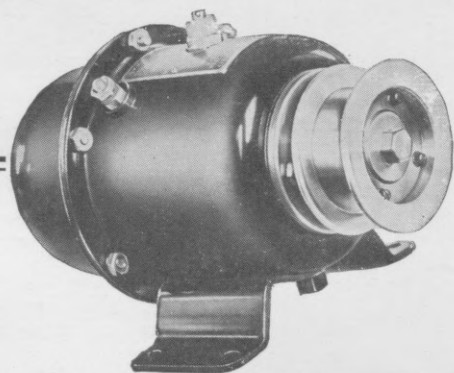
It consists of a highly refined magneto, driven by gear, pulley or universal joint and connected with the shaft. This magneto generates a voltage directly proportional to its driven speed, and this impulse is transmitted by cable to a Weston meter, calibrated in r. p. m. or knots, which is mounted on the switchboard in the engine room. In modern practice a similar recording instrument is also installed in the engineers' and chief officers' cabins.

We invite owners and engineers to consult us on any marine testing requirement.

WESTON ELECTRICAL INSTRUMENT CORPORATION

194 Weston Ave.

Newark, N. J.



Dependable!



C-H Motor Control

DEPENDABILITY—the first requisite of equipment that serves at sea!

Motor Control built for service on land cannot meet dependably, the requirements of marine service.

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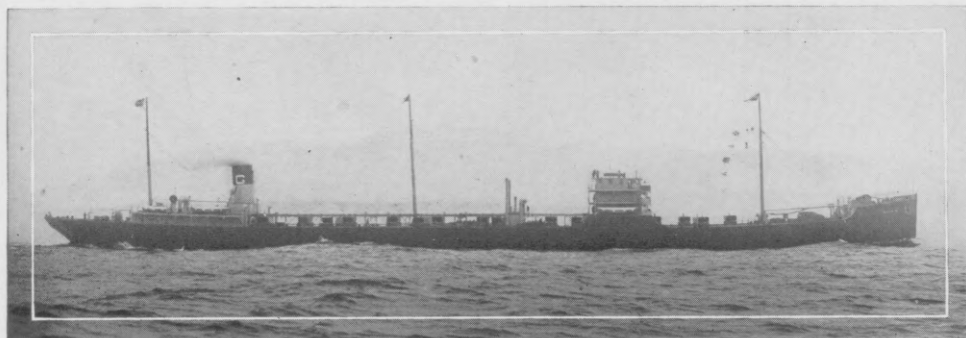
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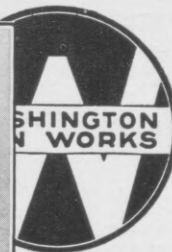
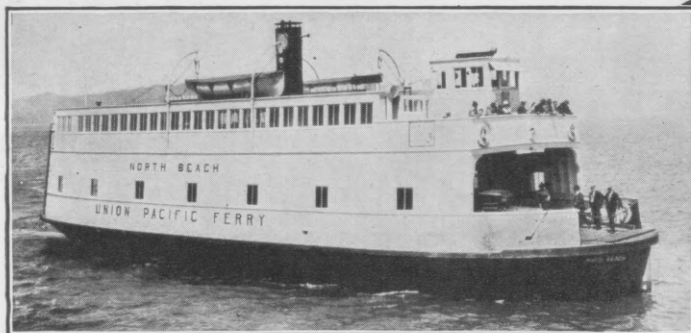
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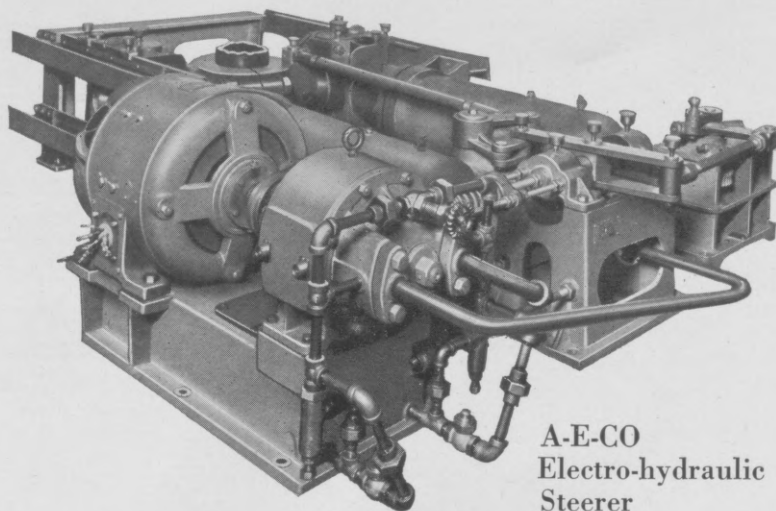
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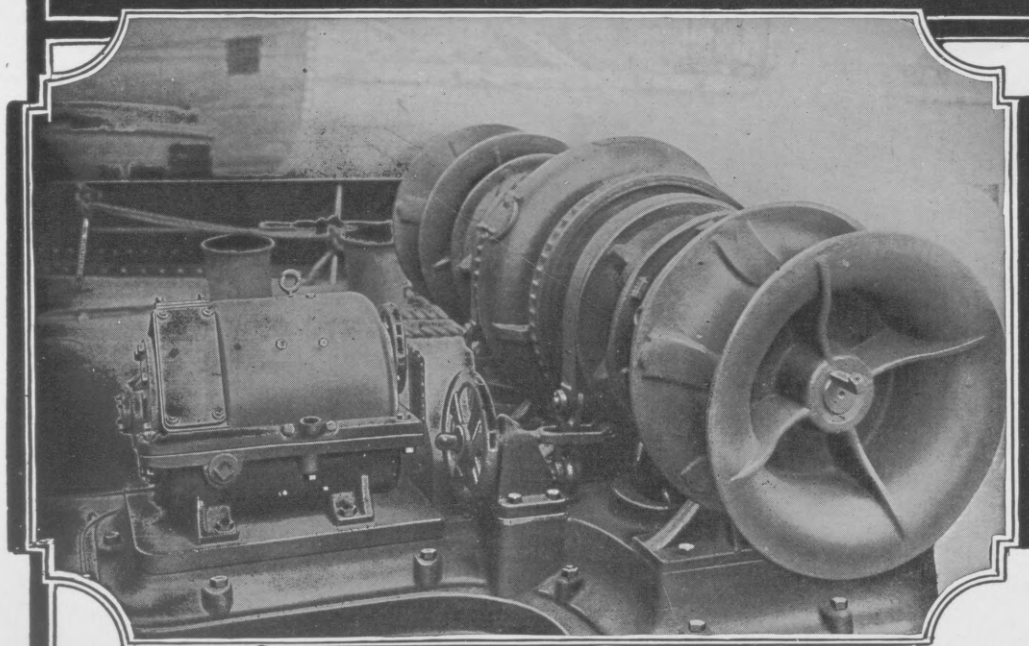
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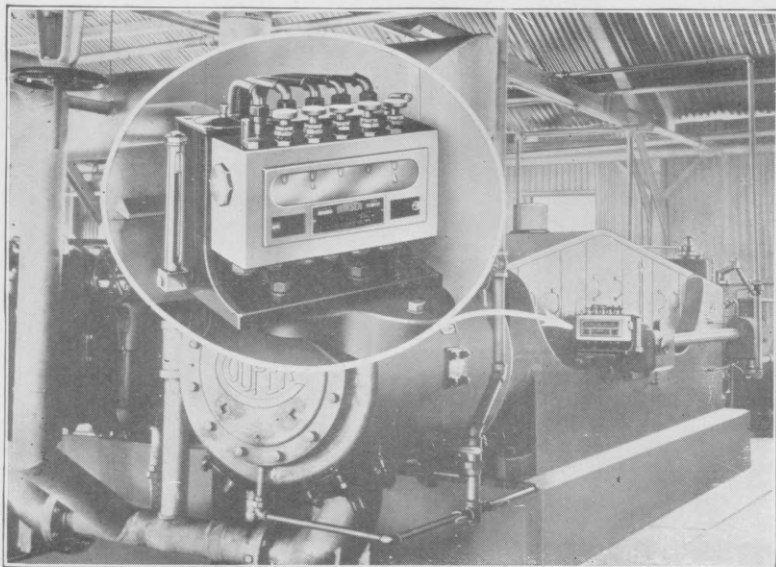
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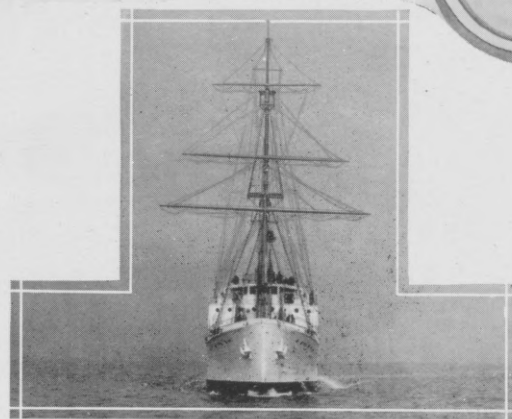
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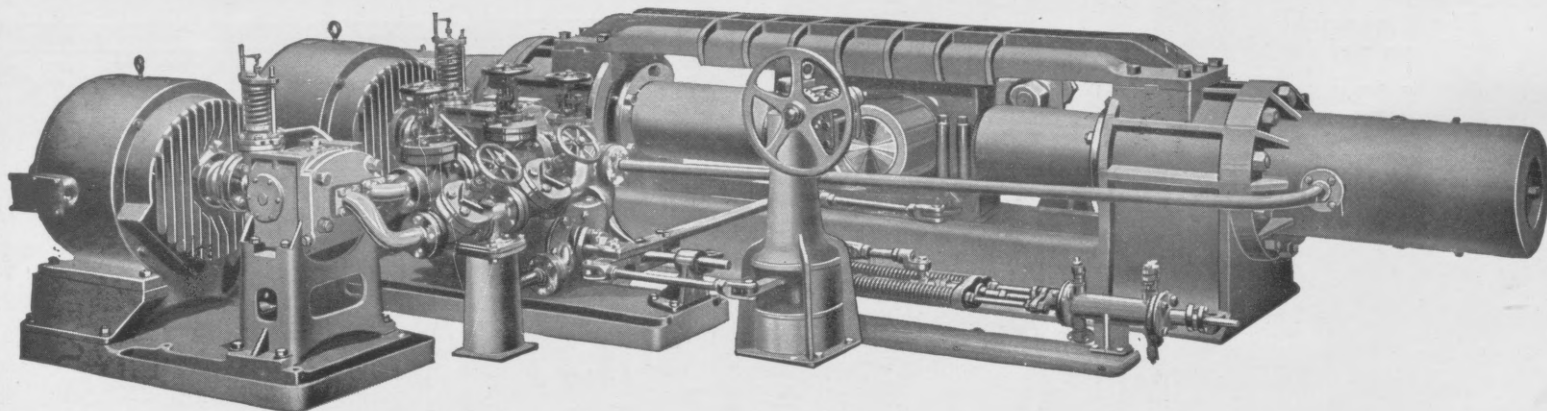


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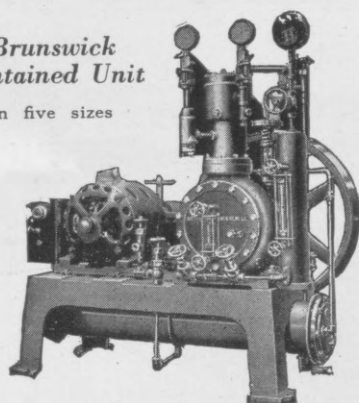
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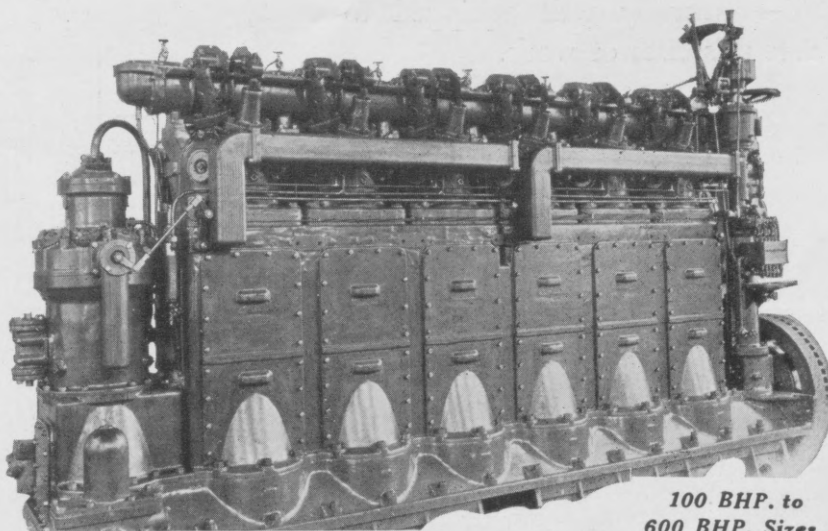
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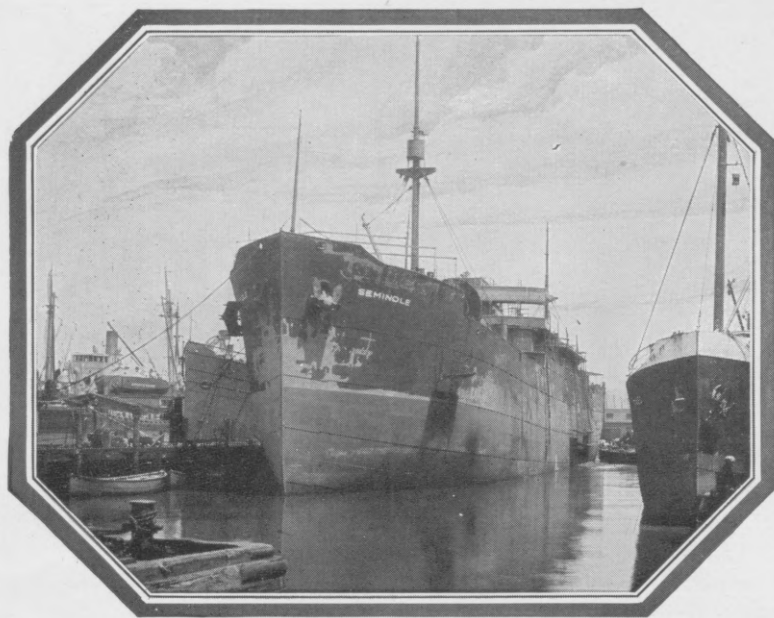
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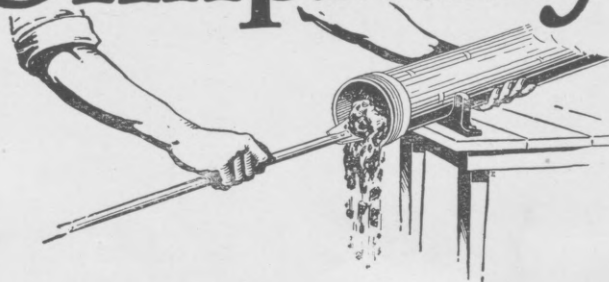
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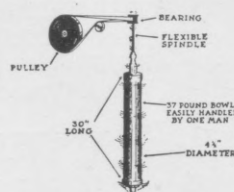
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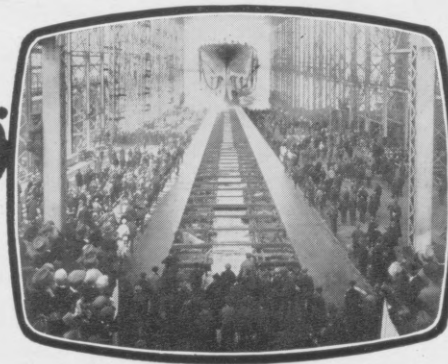
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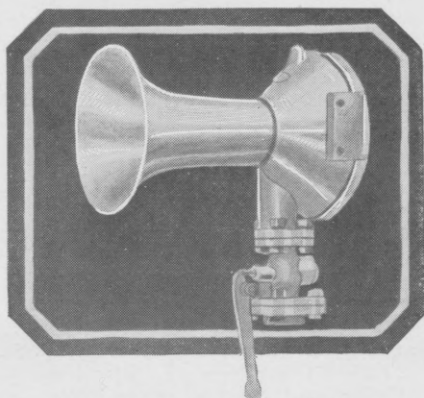
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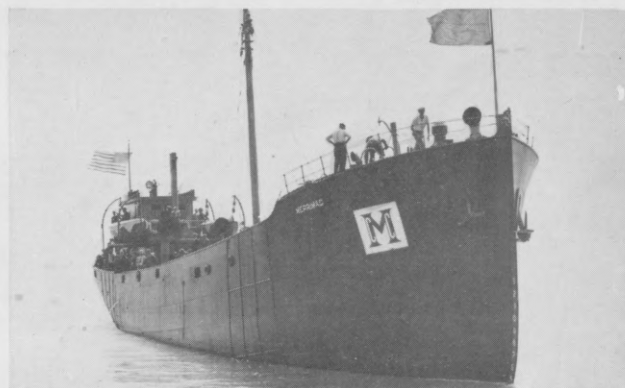
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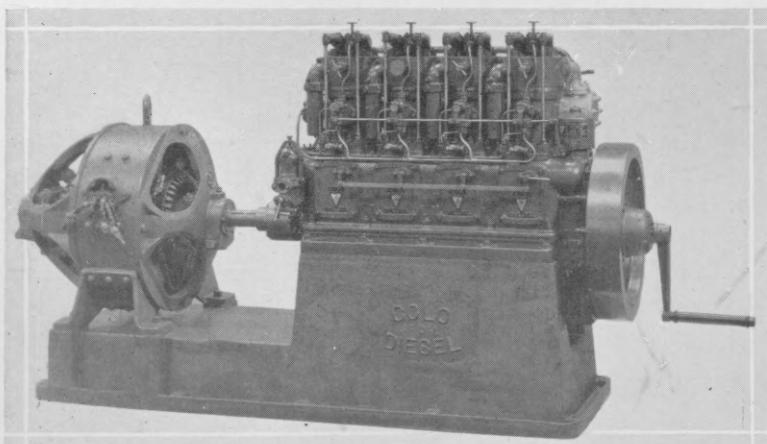
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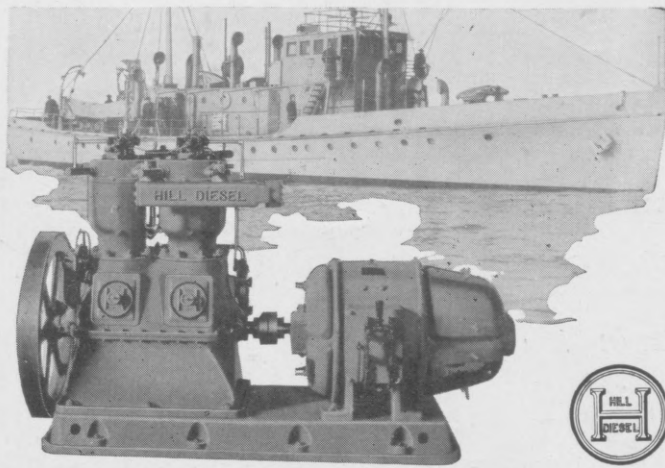
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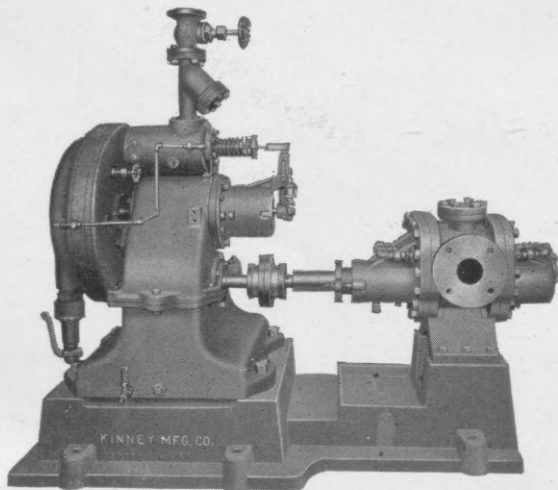
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STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, OF MOTORSHIP, PUBLISHED MONTHLY AT NEW YORK, N. Y., FOR OCTOBER 1, 1927.

STATE OF NEW YORK } ss.
COUNTY OF NEW YORK }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared T. Orchard Lisle, who, having been duly sworn according to law, deposes and says that he is the Manager of MOTORSHIP and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, MOTORSHIP, 220 West 42nd St., N. Y. C.; Editor A. C. Hardy, 220 West 42nd St., N. Y. C.; Managing Editor, None; Manager, T. Orchard Lisle, 220 West 42nd St., N. Y. C.; Business Manager, Russell Palmer, 71 Columbia St., Seattle, Wash.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) MOTORSHIP, 220 West 42nd St., N. Y. C.; Russell Palmer, 71 Columbia St., Seattle, Wash.; T. Orchard Lisle, 220 West 42nd St., N. Y. C.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: (This information is required from daily publications only.)

T. ORCHARD LISLE,
Manager.

Sworn to and subscribed before me this 20th day of September, 1927.

[SEAL]

JOHANNA E. SCHULT,
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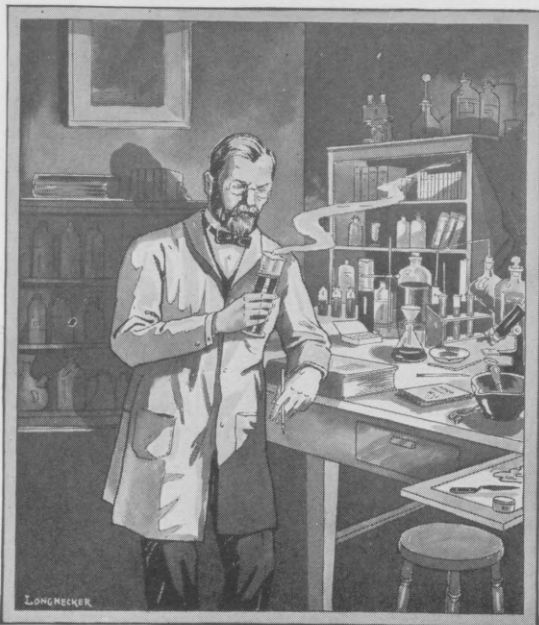
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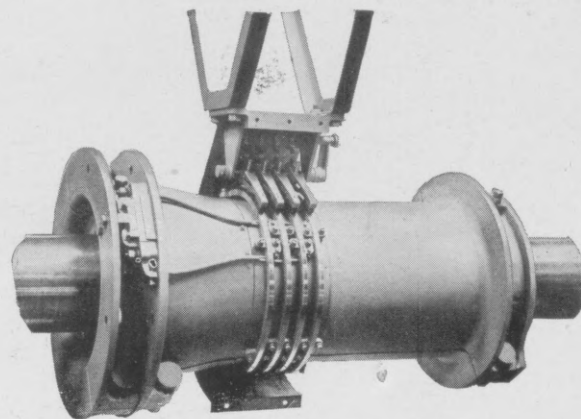


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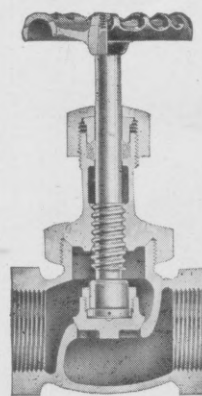
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Sectional view
Fig. 750, screwed
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Valve

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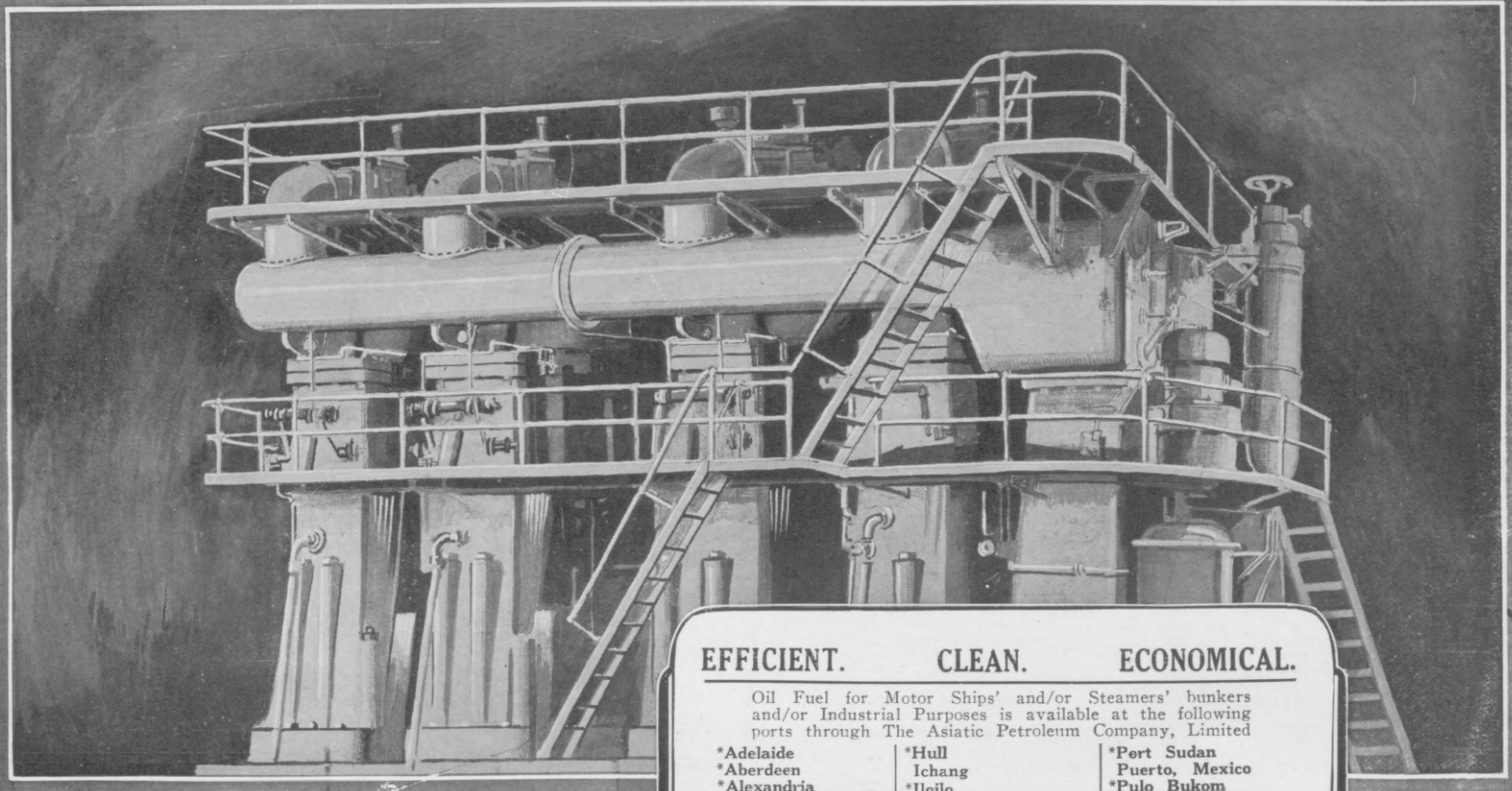


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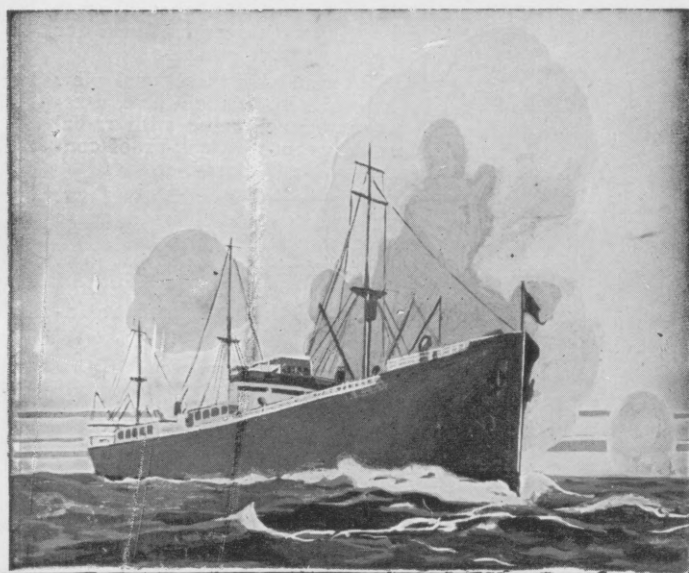
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Canal)	*Las Palmas	*Saigon
*Balik Pappan	*Leghorn	*St. Nazaire
*Bangkok	*Lisbon	*St. Vincent
*Barcelona	*Liverpool	Saitozaki
*Barton (Manches-	*London (Shell Haven	*San Francisco
ter Ship Canal)	and Thames Haven)	*San Juan (Porto
*Batavia	*Macassar	Rico)
*Bergen	*Madras	*San Pedro (Los
*Bilbao	*Malmo	Angeles Harbour)
*Boelebaai Ceram	*Malta	Santos
*Bombay	*Manila	*Seattle (Washing-
*Buenos Ayres	Maracaibo (Vene-	ton)
*Calcutta	zuela)	
Canton	*Marseilles	*Shanghai
*Cape Town	*Melbourne	*Singapore
*Cebu	*Miri	*Sourabaya
*Colombo	*Mombasa	*Southampton
Colon (Panama	*Montevideo	*Stanlow
Canal)	*Montreal	*Stockholm
*Constanza	Nagasaki	*Suez
*Copenhagen	*Naples	Svolvaer
*Curacao	*New Orleans	*Sydney
Dover	*New York	*Tampico
*Genoa	*Oslo	*Tarakan
*Gibraltar	*Palembang	*Trieste
*Glasgow	*Palermo	*Trinidad
*Gothenburg	*Pangkalan Berandan	Tuxpan
*Granton	*Penang	*Vado
*Hamburg	Perim	*Valencia
Hankow	Pernambuco	*Valparaiso
*Havana	*Piraeus	*Vancouver
*Havre	Portishead	*Venice
*Hong Kong	*Portland (Oregon)	Vera Cruz
Honolulu	*Port Said	*Wellington (N. Z.)
		*Yokohama

*LUBRICATING OILS FOR MARINE PURPOSES ARE ALSO AVAILABLE AT THESE STATIONS.

A New Station is expected to be ready shortly at Fremantle.

BUYERS desiring information regarding supplies of and price of Oil Fuel for use in Internal-combustion Engines or for other purposes should apply to The Asiatic Petroleum Co., Ltd., at the address below.

THE Asiatic Petroleum Company, Limited, can arrange to supply Kerosene Oil for use in Internal Combustion Engines, as also Petroleum Spirits, Wax and Greases throughout the World."

THE ASIATIC PETROLEUM CO., LTD.
Saint Helen's Court, Gt. Saint Helen's, London.

BESSEMER DIESELS

The Plant Behind

BESSEMER DIESEL Engines are built in one of the world's largest engine plants by an organization devoted exclusively to the manufacture of internal combustion engines.

The Bessemer Factory, which occupies 458,272 sq. ft. of floor space, is thoroughly modern in all its equipment and is laid out to effect the greatest possible production economies—from Bessemer's own huge foundry to shipping platform.

Behind each Bessemer Diesel is the background of 28 years of engine building experience and the Bessemer reputation for building only the very best.

THE BESSEMER GAS ENGINE COMPANY

89 Lincoln Ave. Groves City, Pa.

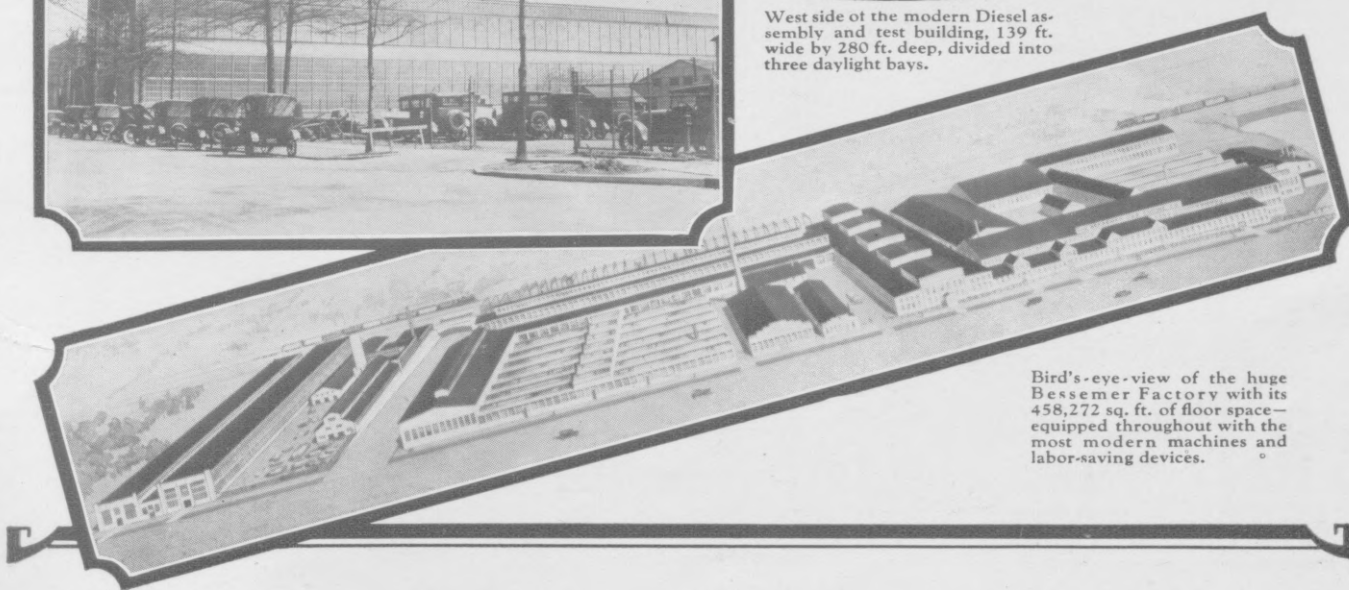
Front view of the Bessemer Diesel erecting plant with its 42,280 sq. ft. of floor space.



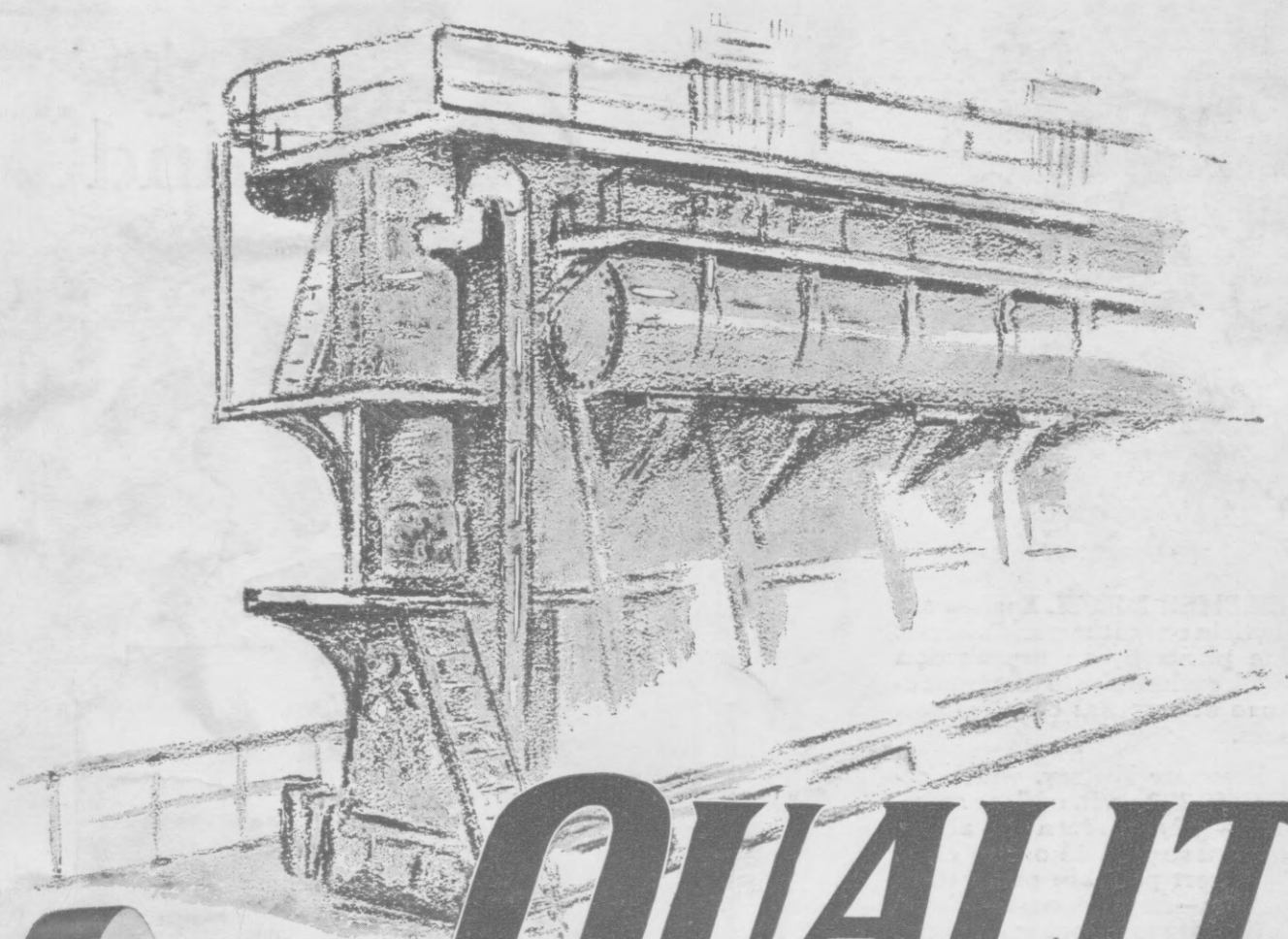
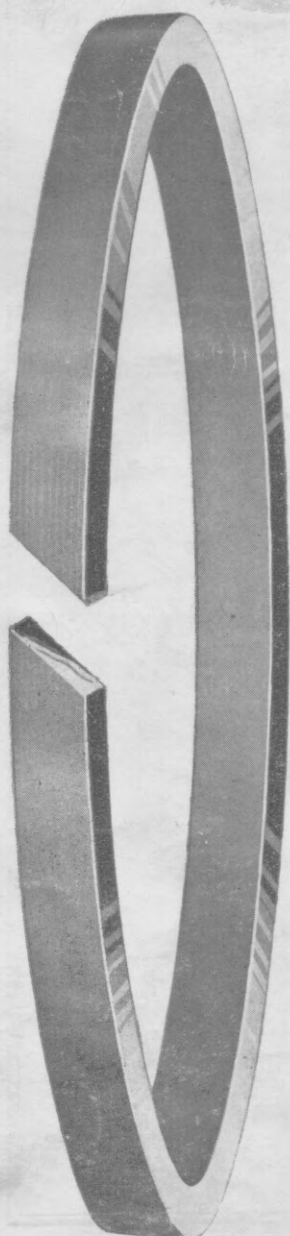
Looking down the west bay of the huge Diesel erecting floor where all Bessemer Diesels are assembled and tested.



West side of the modern Diesel assembly and test building, 139 ft. wide by 280 ft. deep, divided into three daylight bays.



Bird's-eye view of the huge Bessemer Factory with its 458,272 sq. ft. of floor space—equipped throughout with the most modern machines and labor-saving devices.



QUALITY

Piston Rings

more than adequate

THE kind and condition of molding sand; the operation of cupolas; the temperature of iron poured; the chemical and physical analysis of metal all are closely watched to insure good piston ring castings.

The tension or outward radial pressure is distributed equally to all points around the circumference of ring.

Quality Piston Rings seat quickly, take a high polish after which cylinder and ring wear practically ceases, maintain high compression, insure power and economy.

The Piston
RING COMPANY
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